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**T H E**  
**ECONOMIC REVOLUTION OF INDIA**  
**AND**  
**THE PUBLIC WORKS POLICY**



THE  
ECONOMIC REVOLUTION OF INDIA

AND  
THE PUBLIC WORKS POLICY

BY  
A. K. CONNELL, M.A.  
AUTHOR OF "DISCONTENT AND DANGER IN INDIA"

LONDON  
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1883

"Oh, when degree is shaken,  
Which is the ladder to all high designs,  
Then enterprise is sick."

SHAKESPEARE.

"I have known merchants with the sentiments and abilities of great statesmen ;  
and I have seen persons in the rank of statesmen, with the conceptions and  
characters of pedlars."—BURKE's speech on Mr. Fox's East India Bill.

"It is not certain that the despotism of twenty millions is necessarily better  
than that of a few, or of one."—J. S. MILL.

"The best state for human nature is that in which, while no one is poor, no one  
desires to be richer, nor has any reason to fear being thrust back, by the efforts  
of others to push themselves forward."—J. S. MILL.

"After clearly seeing that the structures and actions throughout a society are  
determined by the properties of its units, and that (external disturbances apart)  
the society cannot be substantially and permanently changed without its units  
being substantially and permanently changed, it becomes easy to see that great  
alterations cannot suddenly be made to any purpose."—HERBERT SPENCER.

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## PREFACE.



IN a small book called "Discontent and Danger in India," published three years ago, after a year's continuous investigation in India of the principles of British administration, I attempted to give an account of the working of our land-revenue, legal, and financial systems. I called attention to the ceaseless activity which pervaded all the State departments in their desire to convert the country to the English gospel of material progress. I now see that this activity is, for the most part, the inevitable outcome of far-reaching economic changes, and that these changes are themselves closely connected with the Productive Public Works policy of the Indian Government.

Since I wrote in 1880, our sources of information

on Indian affairs have been largely increased. The Famine Commission has published its Blue-books, and General Richard and Sir John Strachey have published their *apologia pro vitâ suâ* in a volume entitled the "Finances and Public Works of India, 1869-1881." I have examined the complacent optimism of the latter work by the light of the painful revelations of the former, and if I, an insignificant outsider, have inveighed in somewhat warm language against two distinguished Anglo-Indian statesmen, my excuse must be found in the fact that these two statesmen have so identified themselves with the policy which I hold to be radically vicious, that it is impossible to attack it without attacking them.

The object of this present book is to show the consequences of the Productive Public Works policy, not only for the finances of the Indian Government—an aspect of the question which the Stracheys have chiefly considered in their book—but also for the people of India as a whole. The flourishing state of the Indian exchequer for the time being does not necessarily imply the prosperity of the

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people in the long run, because the Indian financial system is so differently conditioned to that of any other Government, that it is impossible to argue directly from the state of the public to that of the private purse.

India is now, in consequence of the outlay on Productive Public Works, subject to the play of economic forces which, when once launched on any land, are like the tides of the sea, remorseless and irresistible in their strength. The dams and the landmarks of the country are being gradually submerged beneath the flood that is ever rolling in from the West. England has in the past let loose the same forces on Ireland, though in a somewhat different way, and is slowly trying to stay their fury now that they have proved dangerous to herself. Are we willing to run the risk of having another Ireland on our hands, an Ireland of two hundred and fifty millions ?

Sir John Strachey will, no doubt, if he does me the honour of reading this book, apply to me the language which he has already used in reply to those people who exhibit "the unfortunate English



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fashion of decrying the great achievements of their countrymen." He will have "neither the time nor the inclination to reply to statements of this sort," but he will be content to class me among "those birds of evil presage which have at all times grated our ears with their melancholy song, and by some strange fatality or other have poured forth their loudest and deepest lamentations at the periods of our most abundant prosperity." This is, of course, merely a rhetorical reply, and a rhetorical reply of the most inconclusive nature. For who is the Daniel called to judgment by Sir J. Strachey? It is Burke—Burke the upholder of justice to America, the champion of Ireland against the commercial selfishness of Bristol and Liverpool, the denouncer of the rapacity of the East India Company's servants, the author of the famous *dictum* that "the temper of the people amongst whom he presides ought to be the first study of a statesman." When it is the policy of the Indian Government, not the conduct of individual officials, that is to be denounced, can it be supposed that Burke would not have been found among the "birds of evil presage"?

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However, as to the truth of the vaticinations of birds, the future alone can conclusively decide ;  
χρὴ τέλος ὀρᾶν.

In conclusion, I may say, that I do not much believe in any financial reforms being advocated either by the Indian Government or the India Office. I agree with Mr. A. J. Wilson, to whose writings I would here express my great indebtedness, in thinking that “nothing short of a catastrophe will ever make that Government seriously think of retrenchment. There are too many traditions, too many departments, too much self-seeking and jobbery, against any such idea.” The crash will come, as the Mutiny came, like a bolt from a clear sky, and, unless the British nation is warned in time, there will be a general wailing and gnashing of teeth.

LONDON, *July*, 1883.



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PART I.  
THE MATERIAL DEVELOPMENT  
OF INDIA.

**"It appears to me that the Productive Public Works expenditure has for a long time been a very heavy charge upon the resources of India."**—*Speech by the Marquis of Hartington.*

THE  
ECONOMIC REVOLUTION OF INDIA  
AND  
THE PUBLIC WORKS POLICY.

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THE transference of the administration of our Indian Empire from the hands of the East India Company to those of the Crown bears a superficial resemblance to the change which took place in the Roman Empire at the fall of the Republic. In both cases the era of conquest was followed by the era of consolidation, in both cases commercial considerations were avowedly subordinated to political, in both cases the monopolization of power by an oligarchy of families was abolished. But here the resemblances cease, and the differences begin. The imperial administration of the Roman Empire led to a longer tenure of office on the part of the



different provincial administrators, to a larger consideration of the interests of the conquered races as compared with those of the conquering country, to the freer development of provincial life, and, finally, to the admission of provincial statesmen to the council-chamber of one absolute monarch. On the other hand, the imperial administration of our Indian Empire has led to a shorter tenure of power on the part of its Viceroys, Secretaries of State, and their respective Councillors; to the total sacrifice of the interests of India to those of political parties; to increased uniformity in local administration; and, finally, not to the admission of natives to the supreme council of the nation, but to the absolute domination of an aggressive and energetic democracy of thirty-five millions over a population of two hundred and fifty millions pre-eminent for their passive and apathetic character. It was the duty of J. S. Mill, whose experience of Indian affairs, coupled with that of his father, extended over well-nigh half a century, to draft the petition presented to Parliament in 1858 by the Directors of the East India Company. This petition was pronounced by Earl Grey to be the ablest State paper he had ever read. The leading ideas of

that paper were embodied by the writer in one of the chapters of his "Representative Government," and form by far the most original and instructive portion of that book.

"The government of a people by itself," he writes, "has a meaning and a reality; but such a thing as government of one people by another does not and cannot exist. One people may keep another for its own use, a place to make money in, a human cattle-farm to be worked for the profit of its own inhabitants: but, if the good of the governed is the proper business of a government, it is utterly impossible that a people should directly attend to it." They are therefore obliged to give some of their best men a commission to look after it; but "they are every now and then interfering, and almost always in the wrong place." This they do in two ways; either they force English ideas down the throats of the natives, or else interfere on behalf of the English settlers. "Now, if there is a fact," continues Mill, "to which all experience testifies, it is that when a country holds another in subjection, the individuals of the ruling people who resort to the foreign country to make their fortunes are of all others those who most need to

be held under powerful restraint. They are always one of the chief difficulties of the government. Armed with the prestige, and filled with the scornful overbearingness of the conquering nation, they have the feelings inspired by absolute power without its sense of responsibility. Among a people like that of India, the utmost efforts of the public authorities are not enough for the effectual protection of the weak against the strong, and of all the strong the European settlers are the strongest. Wherever the demoralizing effect of the situation is not in a most remarkable degree corrected by the personal character of the individual, they think the people of the country mere dirt under their feet; it seems to them monstrous that any rights of the natives should stand in the way of their simplest pretensions; the simplest act of protection to the inhabitants against any act of power on their part which they may consider useful to their commercial objects, they denounce and sincerely regard as an injury. . . . The settlers, not the natives, have the ear of the public at home; it is they whose representations are likely to pass for truth, because they alone have both the means and the motive to press them perseveringly upon the

inattentive and uninterested public mind." And this power of the settlers, when backed up by their supporters at home, is likely to be further increased, if the control of Indian affairs should be placed in the hands of an English Cabinet Minister "who is thinking of English, not Indian, politics." The dangers to the good government of India, which Mill pointed out, have been greatly increased since the idea of developing the resources of the country by the construction of public works has taken hold of the minds of English statesmen. The whole power of English capitalists and manufacturers has been brought to bear on the authorities at the India Office, while English settlers have never ceased to complain of each successive Viceroy's slackness in encouraging private enterprise by improved communications. During the last fifteen years the various commercial interests have found most willing instruments in the persons of the two Stracheys. The latter are not, of course, responsible for the initiation of the Productive Public Works Policy; it commenced with Lord Dalhousie, and has been carried on by each successive Viceroy. But so far as that policy has of late years been most strenuously

pursued, there is no one, since Lord Dalhousie's time, who has played such a distinguished part in shaping it as General Richard and Sir John Strachey. In the hands of these two able men the financial position of the Indian Government has been changed. The key of Indian finance, which used to be kept by the Land Revenue Department, is now to be found in the hands of the Public Works Department, under whose guidance the Indian Government has committed itself to a gigantic commercial speculation, of which the far-reaching consequences, in the shape of "loss by exchange" and the general strain on India's resources, are only now beginning to be realized.

Silently, but surely, in pursuance of this policy, an economic and social revolution has in the short space of twenty years burst upon the most conservative of countries. The status of centuries has been transformed, not by the spontaneous enterprise of the people, but by a *tour de force* on the part of the Government. The means by which this revolution has been brought about have been lately described by its chief promoters, the Strachey brothers, and, as might have been expected, on reviewing their work they pronounce it "very

good." All estimates have been verified, all prophecies have been fulfilled; public burdens have been lowered, trade has expanded, and the land, which for centuries has lain in darkness and despondency, has at length been placed on the royal road to progress and prosperity. Allusion is indeed incidentally made to such minor matters as the starvation of five millions of human beings, and unknown millions of cattle, within the last few years; to the raising of the salt tax during the last thirty years; to the imposition within the last fifteen years of local cesses\* to the amount of £2,300,000, and of nine different license and income

\* Sir J. Strachey, in one or two places, speaks of the burden of taxation as being lighter now than it was twenty-five years ago. It is, no doubt, lighter for the rich, but it is heavier for the poor. Besides the additional taxation mentioned above, it is notorious that the last thirty years' settlement of the land tax has, in various parts of India, notably in Bombay and the North-West Provinces, led to an increased demand. It may be less per head and even per acre, but as a large part of the people on the land are a mere burden, and the poorer kinds of soil have been brought under cultivation, the test of average incidence is worthless. The remission of the income tax and the substitution of the license tax has, as in the case of the abolition of the cotton duties, chiefly benefited the richer natives and the Europeans. For further illustration of this point, I must refer the reader to my brochure, entitled "Discontent and Danger in India." (Messrs. Kegan Paul & Co., 1880.)

taxes. But the repeal of the cotton and other duties, about £1,200,000—which, by the way, fell chiefly on the rich—and the inauguration of free trade, put all these matters into the shade. Such “incidents of the campaign” carried on by Western civilization against Eastern barbarism are hardly mentioned, except to point out the pleasing fact that if the famines had not occurred, the public treasury would have been overflowing. Similarly, India might say, there would have been less taxation if Sir J. Strachey had never been there; but facts are facts, and hypotheses are not surpluses. The question whether there is any relation between the unprecedented sufferings of the late famine years and the construction of public works, and the collection of higher taxes to pay the interest money on the Public Works loans, is utterly ignored by General Richard and Sir John Strachey, and yet this is the question which outsiders cannot help asking themselves. Lord Lytton—who, in home affairs, was merely Sir John Strachey’s grandiloquent spokesman—in a speech delivered in 1878, justified the adopted principle of protecting the country against famine by the example of Turgot. But Turgot’s programme of “point de banquerouté,

point d'augmentation d'impôts, pas d'emprunts," is hardly to be compared to that of the Stracheys, which entails a recurring insolvency, a debt of many millions, and the increase of taxation. And yet no one can doubt that in all they have done they have entertained the most sincere conviction that ultimately the greatest benefits will be conferred on India. Indeed, they are such bigoted believers in the all-saving power of free trade, that they have advocated the introduction of its necessary forerunner, the steam engine, without waiting to count the cost to the country of this expensive missionary. Utterly regardless of the great gulf fixed between what the late W. Bagehot called "a society of grown-up competitive commerce," such as that in England, and a society of customary commerce such as that in India, they have transferred "economical" theories to "uneconomical" societies, and, instead of establishing free trade, they have built up the most oppressive monopolies.

The development of the Public Works policy offers a striking contrast to the settlement of the land-tenure questions. In the one case, the most contemptuous disregard has been shown to



the conditions and character of native life ; in the other, the closest attention has been paid to native customs and ideas. The aim of the settlement officer, however thwarted by the inherent difficulties of his task, has always been to assess the land tax and secure the rights of the various classes interested in the soil in the way which is best suited to the varying conditions of each locality. Grievous mistakes have, no doubt, been made, and great suffering has been inflicted, but the object has always been to adjust as closely as possible British principles of administration to native ways. But the engineer has, as often as not, been given *carte blanche* to construct any public works, which out of his Western wisdom he may think desirable, and has been ordered to develop, *i.e.* Europeanize, the country at all hazards. And the result of these two methods of working is naturally very different. While the land tax, under the principle of a thirty years' settlement, has on the whole been fixed at a moderate rate, local cesses and license taxes have had from time to time to be imposed, owing to the reckless expenditure of the Public Works Department. Indeed, it is very interesting to compare the two types of mind which are fostered in Anglo-

Indian statesmen, according as they look at matters from the Indian or English point of view. Lord Lawrence, who had perhaps spent more time than any other Anglo-Indian administrator in the consideration of the Indian land-question and its bearing on the welfare of the masses, and who always gave the order to his settlement-officers to "assess low," summed up his opinion in the following emphatic sentence: "Light taxation is, to my mind, the panacea for foreign rule in India." But with what does Sir J. Strachey conclude his review of public works and finances? Simply with this: "Although new forms of taxation may be difficult to devise, it would be a great error to suppose that the limits of taxation have been nearly reached." This sentence put into other words means, "develop the country, though the people die." The form of material prosperity, it is argued, which England has developed, is the one thing desirable. England has attained unto it by the help of free trade and railways; let India, therefore, also have free trade and railways. If India cannot supply the capital necessary for their construction, then England will be only too happy to advance it. The money will be spent productively,

and each country will gain by the outlay. If taxation has to be raised in India in order to further this laudable object, yet what are a few millions borrowed by the most benevolent of Governments, and to be returned with interest later on, compared with the vast sums squeezed out of the people by extortionate native rulers, and spent on all sorts of unremunerative extravagances? Of the three factors which go to produce wealth, India has land and labour, and England has capital. All that the Indian Government has to do is to bring about a happy union between the three, and the results will surpass any which have yet been attained in England.

This argument seems very conclusive. It is based on all the accepted doctrines of the great English economists, and no one but a fool can, it is supposed, venture nowadays to dispute the universal applicability of their teaching. But a closer examination of the theory involved will, I think, show that there is a very grave fallacy underlying the deductions which are drawn from it. It is necessary, in the first place, to distinguish three kinds of outlay: (1) That of indigenous capital spent productively; (2) That of the same spent

non-productively ; (3) That of foreign capital spent productively. Now, it is certain that the first kind of outlay is better for a country than the second ; but it is not at all certain, to the same extent, that the third is better than the second. For while money spent under the second head, even if it be raised by taxation, is ultimately returned to the country whence it came, in the shape of wages, etc., and the recipients of such wages may spend it productively, money spent under the third head necessarily leads to a heavy annual drain on the resources of the country which borrows it. And if the foreign capital is borrowed, not by individuals who take the risk themselves, but by the Government (*e.g.* Egypt), which is able, if it finds that its expenditure is not really remunerative, to pledge the whole credit of the nation, and to make up by taxation the sums required for interest on capital, then the consequences may be worse than those caused by the non-productive waste of the Government or individuals. And, lastly, if the Government is a foreign Government, and it borrows of capitalists of the same nationality as that of its own officials, and if the money of the former tends not only to increase the places of the latter, but

to lead to a great rush of settlers, then the jobbery, waste, and oppression which will ensue will exceed anything that is possible, even under the worst kind of native Government. The whole character of the foreign Government, which is *ex hypothesi* superior to the native rule it has superseded, will be transformed, an *imperium in imperio* will be established, and the whole power and prestige of the governing body will be utilized, not for the protection, but for the plunder of the governed. And this, as we shall see later on, is what is actually happening in India.

In comparing the revenues of the Moghul \* and British Empire in India, Dr. Hunter writes: "Not only is the taxation of British India much less than that raised by the Moghul emperors, but it compares favourably with the taxation of other Asiatic countries in our own day." Assuming Dr. Hunter's figures to be correct, it must be pointed out that there is one most important difference between

\* Dr. Hunter and others are always comparing British and Moghul rule, but the latter was the rule of foreigners in race and religion, though they were residents. But, as every one knows, the Moghul rule was passing away when we first established ourselves in India, and we ought to compare our Government with the best *Hindu* rule.

our rule and that of the Moghuls, and that is, that the revenues they raised in India they spent in India, whereas we send every year about £20,000,000 out of the country for home remittances, and by our construction of railways we have destroyed the industries of a vast portion of the population. "If their passion or their avarice," said Burke, "drove the Tartar lords to acts of rapacity or tyranny, there was time enough even in the short life of man to bring round the ill effects of the abuse of power on the power itself. If hoards were made by violence, they were still domestic hoards, and domestic profusion or the rapine of a more powerful and prodigal hand restored them to the people.\* With many dis-

\* £5 to £6 a year will keep a family in India. The Indian Government has of late years been looking with a very covetous eye on the rental of the Bengal zamindars, said to reach £13,000,000, of which, if it were not for the Permanent Settlement, the Government would claim six and a half millions instead of three and a quarter. But if the Government got hold of this sum and spent it on costly canals, it is very doubtful whether Bengal would be benefited as it is at the present time, when a large part of the rental is said to be spent unproductively by the zamindars. Moreover, a large number of sub-holders have sprung up between the zamindars and the ryots, and these absorb a share of the rental. I am not arguing against the Bengal Rent Act, but only against any further invasion of the Permanent Settlement by the imposition of local cesses.

orders and few political checks on power, nature had still fair play; the sources of acquisition were not dried up, and therefore the trade, the manufactures, and the commerce of the country flourished. . . . But under the English Government all this order is reversed . . . it is our protection that destroys India. It was their enmity, but it is our friendship." The charge which Burke brought against the East India Company in its worst days is still more applicable to the Government of India under the Crown. Sir J. Strachey points triumphantly to the fact of the productive nature of a great part of India's debt; but the question is, 'To whom is it productive of wealth? is it to the English capitalist, or to the native cultivator? Loans raised for productive purposes may only lead to loss of commercial profits, and the taxation imposed to float these loans may be merely another name for the price paid in effecting the conveyance of business from the hands of natives to those of foreigners.

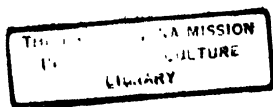
The poverty of India is now admitted by all competent authorities, but the cause of that poverty is still a disputed point. On this subject Sir Henry Maine, in his recently published work, "Early

Law and Custom," writes as follows :—"The true secret of the poverty of India, from which she is slowly recovering, I take to be the desolation caused by the war and brigandage of about two thousand several chiefs, while the Moghul dominion was dissolving. I think that India, during the reign of Akbar and Jehangir, was probably as rich as the Western world thought, but its carefully hoarded capital was destroyed in the same way as the accumulations of the Roman Empire." But surely it is too late in the day to throw the blame of India's present poverty on the brigands that have ceased to exist in Bengal for more than a century and a quarter, in Madras and Bombay for more than seventy years, and in the rest of India for at least half a century. If any one is to be held responsible for that poverty, it is the British Government ; and if it has failed to diminish that poverty—still more, if it has actually stimulated its growth—it has done so under the influence of a false idea as to what constitutes the basis of national wealth and well-being. It has assumed that, in a country of *petite culture* and home industries, a large expenditure of foreign capital is of more utility than the petty outlays of native savings ; that



collision between the interests of capital and labour is preferable to their co-operation ; and that capital ought to be the master of labour, and not its servant ; while it has forgotten that it is the absence of security on the part of millions of labourers to reap all the fruits of their labours, not the absence of vast accumulations of capital in the hands of a few, that has been at the bottom of Asiatic indigence. Speaking generally, there are two main types of civilization known to history, the progressive and the stationary, the former being closely connected with commerce, the latter with agriculture. In the course of centuries, England has developed the former type, India the latter ; but we have assumed that the latter can be transformed into the former by the mere mechanical means of money. We have, indeed, succeeded in breaking up the ancient civilization of India, but we are very far indeed from having imbued the people with the spirit of our own. The two types are too far apart for an ignorant peasantry, entirely occupied in the struggle for existence, to readapt themselves to the demands made upon them. The consequence is obvious : through the breaches we have made in the wall of firmly fixed custom, we

have let in the enterprising foreigner and the native middleman of the trading centres, who bring with them the spirit that is adequate to the changed condition of society. Enforced progression has been identified with spontaneous progress, and a superficial movement with a radical transformation. "Improvement in the material condition of the people of India," writes Sir J. Strachey, at the conclusion of his book, "without which no other forms of progress can be assured, is to be obtained only through an accumulation of wealth accompanying a steady development of the foreign trade. The means of accomplishing this are obvious and quite within our reach; if we fail to provide them, we fail to fulfil a most imperative duty of the governors to the governed. These means lie in an intelligent extension of the great public works which the country requires, whereby will be secured its future well-being and the continued prosperity of its finances." This is so clearly the voice of economic fanaticism and self-approving congratulation, that our scepticism is inevitably excited, and we feel forced to examine the consequences of theories which have been so inconsiderately transferred from their natural nidus in England to an



alien habitat in India. Certainly, *à priori* considerations lead us to doubt the conclusiveness of the above argumentation ; but let us now proceed to apply the *à posteriori* method of inquiry.

PART II.  
RAILWAYS.

“ There be but three Things which one Nation selleth to another the Commodity as Nature yieldeth it; the Manufacture; and the Vecture or Carriage. So that if these three wheels go, Wealth will flow as in a Spring tide. And it cometh many times to pass that the Work and Carriage is more worth than the Material, and enricheth a State more.”—BACON.

THE policy of Extraordinary Public Works may be said to have been set on foot in 1849-50, when the first Guaranteed Indian Railway Company was formed. During the next thirty years the sum of over £99,000,000 was raised in the English market under the security of the Indian Government's guarantee of five per cent.\* As up to the year 1877 the net earnings of these railways were not sufficient to pay the guaranteed interest, the State had to advance the sum required out of the ordinary budget. These accumulated arrears of interest amounted in 1881 to the enormous sum of £28,425,119,\* so that, if we add this sum to the

\* See Indian Railway Report for 1881-82, par. 59. Sir J. Strachey ("Indian Finances," p. 123) says: "It may easily be calculated that the accumulated net charge due to the productive public works, guaranteed railways, State railways, and irrigation works, from 1868-69 to the end of 1880-81, with compound interest yearly at 4 per cent., would amount to rather more than £22,000,000." But it is very misleading to choose 1868-69 as the *terminus a quo*. Interest charges had to be paid for years before that date. Sir J. Strachey may confine his review to 1869-1881,

capital mentioned above, we shall find that the capital really expended is over £127,000,000. The heavy expenditure thus entailed on the State led to a reconsideration of this railway policy, and it was decided to have a State Public Works Department.

The new scheme of Extraordinary, or, as it is now termed, Productive Public Works, was first proposed in 1864. It was pointed out that the sums, about £500,000 yearly, available from the surplus revenues for the purpose of extending irrigation as a protection against famine were absolutely insufficient, and it was desirable to supplement them by borrowing during the next ten years about thirty millions sterling. It was calculated that the earnings would gradually overtake the expenses, and that before long the whole interest on the borrowed capital would be covered, the charge meanwhile being met from the general revenues. The scheme, which was put into definite form by Colonel R. Strachey, was sanctioned in 1868-69. "The expenditure during the first five years averaged less than two millions yearly. In

but we must go further back than that to get at the real state of the case. Sir J. Strachey reckons the net earnings of that date, and yet leaves out of account the previous losses.

1870 it was decided that the further extension of railways should, as a rule, be undertaken directly by the State, instead of, as heretofore, through the agency of companies, and that the funds should be supplied, as in the case of the larger irrigation works, by borrowing. After 1871 the expenditure on railways considerably increased, and in 1873-74 and subsequent years the Public Works extraordinary expenditure rose to three and a half millions and upwards, the average for eight years, including 1880-81, being a little more than four millions yearly, and the total amount, which appears as capital outlay from borrowed funds during the fourteen years from 1867-68 to 1880-81, being £41,486,000." \* It was calculated in 1873

\* The above account is taken from the Famine Commission's Report. This report, like many others drawn up by Commissioners, is obviously a medley of compromises. The members of the Commission appointed in 1879 were—General Strachey (President); Mr. Justice Cunningham; Mr. J. Caird; Mr. H. E. Sullivan, Madras Civil Service; Mr. J. B. Peile, Bombay Civil Service; and Mr. C. A. Elliott, Bengal Civil Service. Any one who reads through the Blue-books will find that the conclusions arrived at are curiously inconsistent with the promises. The part referring to Productive Public Works is evidently written by the President or Sir J. Strachey, as whole paragraphs are word for word the same as certain pages in Sir J. Strachey's book. The promoters of the Public Works policy are thus allowed to sit in judgment on their



that the annual charge on the revenues resulting from excess of interest over net revenue would in 1877-78 amount to £1,990,000, inclusive of the charges involved for interest on the Guaranteed Railways capital.

In 1876, owing to the great fall in the value of silver, and the heavy losses entailed by famine, "it was resolved to restrict the outlay on Productive Public Works to the amount which it was thought could be borrowed in India without unduly pressing on the market, then estimated at two or two and a half millions per annum." Stricter rules were also laid down for "limiting the outlay of borrowed money to works which could certainly be declared to be remunerative. These orders have recently been reiterated with increased emphasis, and the sum which, under the latest instructions of the Secretary of State, may be raised by loan for expenditure on public works of all descriptions, excepting the East Indian Railway, is two and a half millions yearly." In

own work. The verdict is obviously not that of impartial judges. Mr. Caird's opinions, on the other hand, are those of an impartial outsider reviewing the work of others; and his separate memorandum, entitled "The Condition of India," deserves especial notice.

pursuance of this policy a capital sum of thirty-four millions, or of about thirty-two millions if we exclude the frontier railways, paid for out of the charge for the Afghan war, has been expended on State railways. This capital has been raised generally at four per cent., and, as the lines built by the State only now earn two per cent., and as the difference between this and the required interest has only recently been covered (I assume for the moment the correctness of official calculations) by the surplus profits of the East Indian Railway, there has been in the past a yearly charge on the revenues. Up to the years 1879-80 this amounted to between two and three millions sterling. As in the case of the Guaranteed Railways, this sum ought to be added to the amount actually borrowed, in order to give us the true cost of construction. A perusal of official reports shows that these items are not taken into consideration, the theory being that when the railways earn surplus profits they will pay back the arrears of interest. On the works of irrigation, "for which capital and revenue accounts are kept," there had been spent up to the close of the year 1880 more than £20,000,000. We see, then, that the sum total spent by the State

and companies on Productive Public Works during the last thirty years or so amounts to over £180,000,000, a sum equal to nine years' land revenue. During the same period there has been a further outlay, provided chiefly by the revenues, of somewhere between fifty and sixty millions on ordinary,\* *i.e.* non-productive, public works, such as barracks, buildings of all sorts, bridges, and roads, the latter in many cases after heavy expenditure being superseded by the railways.

It might naturally be supposed that if this vast capital has been expended in India during the last thirty years, the labouring classes must have benefited by such an enormous addition to the wage-fund of the country. This is what Sir J. Strachey writes: "It is difficult to conceive conditions under which the remittance of interest on foreign capital judiciously applied could be onerous to the country which pays it, for the investment must necessarily have led to the outlay of a larger

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\* I am unable to go into this item of expenditure, but a parliamentary inquiry would certainly show that there has been most frightful waste of money. The well-known case of the Saugor barracks tumbling down might be easily paralleled. I myself have been told of bridges—one in Hardui—never used by the natives.

sum than the interest sent away, and the balance of what is thus produced remains in the country. Thus in the case of the guaranteed railways, about a hundred millions of capital have been raised and spent in India, and, say, £5,000,000 a year have to be paid in England as interest on that capital, the railways paying this £5,000,000 by earning a gross income of £10,000,000, of which £5,000,000 is spent in wages or other working expenses, and affords increased profitable occupation to the people of the country. The persons who voluntarily (*sic*) pay the £10,000,000 for the use of the railways are themselves largely benefited by them, and would have to pay much more had they been obliged to use rude means of conveyance."

This statement is brimful of fallacies, as a reference to the annual report on Indian railways easily shows. The truth about the capital expenditure is as follows. Of the Guaranteed Railways capital of £96,794,226, spent up to the end of 1880-81, £46,918,177 were withdrawn in England and £49,876,049 in India, while the charge for interest, amounting, as shown above, to about £28,000,000, was almost entirely remitted to England. Thus of the sum total of capital required for the construc-

tion of these railways only £21,000,000 were actually spent in India, and as the sum remitted by the railway companies themselves up to 1881 reached the amount of over £29,000,000, there was no balance at all remaining in the country. Indeed, there was a deficit on the whole transaction of £8,000,000. So far, then, from this investment of foreign capital leading to "an outlay of a larger sum than the interest sent away," it actually led to the outlay of a smaller sum than would have been spent in the country if no guaranteed railways had ever been built.\*

Of the £32,000,000 odd raised for State railways, twenty-four millions have been appropriated in India, and seven and a half millions in England,† while the charge for interest, between two and three millions to be added to the capital account, has also gone to England. Of the capital raised for irrigation works, the largest proportion, if not the whole, has been expended in India, there

\* The total amount of guaranteed interest advanced up to December, 1881, was £54,499,780, of which the Government advanced £24,962,440, and the railways earned £29,537,340. These sums are exclusive of the East Indian Railway.

† This part of outlay will probably be increased when the railways are "equipped."

being no large purchases in England of rolling stock, iron for bridges, etc., as in the case of the railways, but the interest is remitted to England.

In considering, therefore, the general effect of productive public works, it is most important to keep the following points well in mind: (1) That about one-half of the capital sum spent in connection with public works in India has been spent, not in India, but in England; (2) that almost the whole interest, amounting to between six and seven millions a year, is remitted to England. Supposing that English railways had been built out of French iron, etc., and the capital had been raised in France, we should then be able to understand what a fine instrument of plunder may be found in a railway system established by means of foreign capital and native taxation, and actually built to a great extent out of foreign materials. The fact is, that there is all the difference in the world between a country which has itself voluntarily furnished the capital and materials for its railways and that which has not. In the one case, the profits of the undertaking are distributed among indigenous capitalists, and work is provided for home workmen; in the other, the

profits leave the country, the very possibility of these profits is secured by taxation, and the only work provided for the native labourer is that of making the embankments, stations, etc.; and for this, owing to the density of population, he receives the *minimum* wage possible.\* Nor is even the whole of the money spent in maintaining and working the lines distributed among the natives. Coal to the amount of 175,951 tons, and a large amount of new carriages, etc., come from England, and of the total number of *employés* (169,577), 3763 are Europeans, earning the highest wages. On the other hand, those who used to carry on the transport trade, now superseded by the railways, must have earned a good deal more than the 165,814 natives employed on the lines. They are now thrown on the overburdened land. Finally, Sir. J. Strachey calculates that India is benefited by reason of its cheapened transport "thrice the gross receipts (over £14,000,000), or £40,000,000

\* While the capital outlay in India on railway construction reached the annual sum of between three and four millions, labourers had a large wage-fund to draw on; but as the outlay is necessarily contracted, the coolies are left with nothing but enhanced prices. The Public Works policy of Paris has led to a similar result.

yearly." I shall return to this point later on; but it may be here pointed out that, assuming that all the goods traffic is a natural and not a forced trade, yet that traffic yields only £9,000,000—the rest is passenger traffic—and the profits must be calculated on this sum only, and would therefore be twenty-seven, not forty millions, an astonishing blunder on the part of Sir J. Strachey, something like that famous confusion of figures in the Afghan war. But assuming that the gross receipts for passengers are to be included, and that forty millions are saved to the country, is it not obvious that whereas now only £7,000,000 are spent in the country on wages, £40,000,000 in wages and profits would be distributed in the country if the trade were still in the hands of native carriers? What, then, becomes of the people thrown out of work? The fact is, that Sir J. Strachey's calculation is a rather extravagant one. Without the existence of the railways, the trade, as we shall see later on, would be considerably lessened, and desirably so, except where it is really developing the resources of the country or carrying off surplus grain. The one satisfactory, because popular, feature in the railways is the passenger traffic. There were



about fifty-two million passengers in 1881, of which 97·74 per cent. were of the lowest class (railway), taking tickets to the amount of two and a half millions sterling; but we are perhaps encouraging, in a not very paternal way, the childish native to waste his money on unproductive expenditure, instead of improving the land. He thinks he may as well pay for enjoying himself, as the benevolent Sarkar will probably "loot" him in other ways, if he does not voluntarily give something to the great God.

Having now stated correctly the real amount of capital expenditure, and noticed a few preliminary points, I will proceed to consider the question, Do the Productive Public Works pay their way, and what general effect have they had on the country? Sir J. Strachey's verdict (in 1881) is as follows:—  
"A retrospect of this chapter of our administration shows that, notwithstanding many unforeseen obstacles, the results obtained have greatly surpassed in their success the moderate anticipations of those who initiated the policy of carrying out works of permanent utility with borrowed money. . . . All that was first asked was, that this policy should not lead to any increase of the public burdens. It has already reduced these burdens by

a yearly amount of £3,000,000 sterling." It may be remarked incidentally that the public burdens spoken of mean £1,800,000 of interest for Public Works loans, and £1,200,000 of interest on the ordinary debt of India. The reduction of the first burden means merely the reduction of one imposed by the railways and irrigation works; while the reduction of the second might have been more easily effected without the railways.

The official returns taken from the Blue Book on Indian railways for 1881-82 are as follows :—

Railways.	Capital.	Gross receipts.	Working expenses.	Net earnings.
	£	£	£	£
(1) Guaranteed	67,329,179 *	6,718,492	3,607,668	3,110,824
(2) East Indian	31,987,379 †	4,541,147	1,446,816	3,094,831
(3) State lines, including lines in Native States. Not all finished	34,884,023 ‡	2,466,314	1,719,255	747,059
	134,200,581	13,725,953	6,773,239	6,952,714

\* Capital raised at between 1s. 10d. and 2s. the rupee.

† Lately purchased by State, which has to pay annuities, etc., and to give share of profits to the working company. The capital was raised at 1s. 10d. the rupee, but the gross receipts are reckoned at 2s. the rupee. This is mere fancy reckoning.

‡ Capital raised partly in England and partly in India. The receipts, etc., are reckoned at 2s. the rupee.

### 38. *The Economic Revolution of India*

Railways.	* Interest.	Result to State.	Loss by exchange.	Accumulated interest charges.	Loss by exchange up to 1881.
	£	£	£	£	£
(1) Guaranteed	3,272,651	-161,827	about 520,000	24,962,440	about 1,000,000
(2) East Indian	1,681,345	+1,207,100*	881,553	3,462,679	about 600,000
(3) State lines, including lines in Native States. Not all finished	1,395,360	-648,301	about 100,000	about 2,500,000	about 150,000
	6,349,356	396,972	1,001,553	30,925,119	1,750,000

According to these figures there is a clear surplus of £396,972, after the payment of interest on the total capital borrowed; but a glance at the three last columns proves that this surplus is purely fictitious, as there is an annual "loss by exchange" of about one million sterling, and four per cent. interest at least ought to be charged on the thirty millions sterling of accumulated interest charges. In the Indian Budget the item of "loss by exchange—about £3,000,000 a year, caused by the home remittances on Public Works debt, Administration, and ordinary debt—is entered under a lump

\* Working company's share of the profits, £206,386.

sum, so that that part which is entailed by the Productive Works loans does not appear under the head of railway charges. But as it is at present an essential condition of these charges. it ought to

ERRATUM.—PAGE 38.

Later returns show that I have under-estimated the arrears of interest for State Railways. They amount to over £4,000,000. Read, therefore, on pages 57, 58, 74, "£35,000,000" instead of "£30,000,000."

deficit of over two millions on the *whole* capital outlay on Indian railways. To avoid further loss by exchange the Indian Government now raises its annual "Productive Public Works Loan" in the Calcutta market, except so far as it employs companies, but of course it does not get it on such good terms as it would in the English market, and it is not at all likely that the new lines built by the State will earn the same profits as those which form the main arteries for trade. So well aware

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sum, so that that part which is entailed by the Productive Works loans does not appear under the head of railway charges. But as it is at present an essential condition of these charges, it ought to be reckoned just as much as any other item, for it obviously affects very closely the consideration of the Public Works policy. Sir J. Strachey may set it aside as an "unforeseen" item, but as he admits that loss by exchange acts as a stimulus on Indian trade to the extent of a two and a half per cent. bounty, and as the railways get the benefit of such stimulated trade, it is absurd to accredit the gains and not the losses. Taking, then, into account the loss by exchange, and interest on the past interest charges, we see that there is a yearly deficit of over two millions on the *whole* capital outlay on Indian railways. To avoid further loss by exchange the Indian Government now raises its annual "Productive Public Works Loan" in the Calcutta market, except so far as it employs companies, but of course it does not get it on such good terms as it would in the English market, and it is not at all likely that the new lines built by the State will earn the same profits as those which form the main arteries for trade. So well aware

is the Indian Government of this aspect of the question that it has lately been trying to induce "private enterprise" to construct the next railways; but it has not been very successful. The shares of the Bengal and North Western Company, though backed by the Rothschilds and Barings, have not been taken up very readily, while in the case of the new Bengal Central and South Mahratta Companies it has been found necessary to give a guarantee for four, and three and a half per cent. interest, while the railways are being constructed. This distinct diffidence on the part of private enterprise, in spite of the boasted success of the existing lines, seems to show that the British investor is not so easily persuaded of the increasing prosperity of India. Major Baring may pipe, but the investor will not dance, because he remembers certain items lightly passed over by Sir J. Strachey, and he fancies that the famine sufferings, which are set aside as abnormal and unaccountable, may result from a gradual exhaustion of the country's agricultural resources; and new industries, such as iron, copper, and gold mines, do not make great progress. Unpleasant rumours have of late years been floating about as regards the deterioration of

the soil in various parts of India, and the evidence \* of an optimistic Anglo-Indian like Sir Richard Temple, who has served in nearly every part of India, as given before the Famine Commission, is not at all reassuring. In answer to Mr. Caird's questions, he said: "I believe that in many parts of India a gradual exhaustion of the soil is going on. . . . The yield of the crops is popularly supposed by the natives of the country in many parts of India to be gradually decreasing." "Wheatland in the North-West Provinces," writes Dr. Hunter, "which now gives only 840lbs. an acre, yielded 1140lbs. in the time of Akbar, and the reason assigned for this falling off in the yield is chiefly want of manure." In the same way Mr. A. O. Hume, the late secretary to the Agricultural Department, writes: "That the gradual—and perhaps, later, suddenly rapid—deterioration of the major portion of our cultivated lands is, unless a totally new system be inaugurated, inevitably impending, can be denied by no one conversant with the subject." Speaking of Madras, Mr.

\* See Appendix II. of Famine Report, pp. 38, 39. Mr. Caird came to the conclusion that the land in many parts of India is undergoing gradual exhaustion.



Robertson, Head of the experimental farm in Sydapett, says: "Experienced men positively assert that the deterioration during the last thirty years has been no less than thirty per cent." And yet the Indian Government points with satisfaction to the export trade in grain to the amount of between thirty and forty million hundredweight, and on the strength of it calls to capitalists to "come over and help them" to construct more railways. Perhaps within the next half century nothing will be seen in some parts of India but an engine like the crow in the *Georgics*,

"Quæ sola in siccâ secum spatiat<sup>r</sup> arenâ."

But, it will be replied, though the Indian railways do not, as yet directly pay their interest on the whole of the capital sum expended, yet the benefits they confer on the country are so great that not only is the policy of building the lines already existing amply justified, but we ought to add another ten thousand miles. What, then, are these benefits? First, they are said to have a high strategical value. Their use in this respect is no doubt great, but it is probably much overrated. Against external foes, as was shown in the case of the Afghan war, *so long as India remains quiet*, they

would no doubt prove most useful ; but in case of a general uprising on the part of the natives, it may be doubted whether the difficulty of guarding them might not prove too great, and our soldiers, now unaccustomed to an animal transport service, might be in a worse position than they were during the Mutiny. But, granting that the railways are from this point of view invaluable, they must, so far only be regarded as a necessary item in military expenditure, as indeed is the case with the frontier railways. Secondly, it is said that they advance the commerce, civilization, and general prosperity of the country. No one can deny that the trade of India, as tested by the import and export statistics, has increased very rapidly during the last thirty years, but it is forgotten that it is not merely the increase of exports and imports that ought to be considered, but the whole external and internal trade of the country. For instance, during the last ten years, the value of cotton (manufactured) imports has risen from fifteen to twenty-one millions sterling, but it must not therefore be supposed that the natives of India have suddenly grown rich enough by that amount so as to be able to buy cotton clothes. The profits of the cotton trade have

merely been transferred from the pockets of Hindoos to those of Englishmen. Again, the value of the export trade in grain has increased since 1872 from something less than £5,000,000 to over £12,000,000, but does this arise from the great surplus wealth which has been called into being by the railways? To some extent wheat-growing, especially in the Punjab\*—an, as yet, not overpopulated province—has been promoted by the external trade; but a large part of the export trade in grain represents food diverted from the mouth of the half-famished labourer. Dr. Hunter, in his “England’s Work in India,” says, “Two-fifths of the people of British India enjoy a prosperity unknown under native rule; other two-fifths earn a fair but diminishing subsistence; but the remaining

\* The Punjab Administration Report for 1881–82, states that with the increase of the area under wheat there is a decrease of that under barley and gram, the chief food of the poorer classes, as far as the spring crops are concerned. Indigo and cotton are also superseding rice; at the same time, a large number of weavers are taking to the land. This economic change is chiefly due to the two Punjab railways, which only now yield a net return of £396,000, to cover interest charge of £810,000. Does the Province really benefit by this quickened external trade? In the famine of 1877, though the spring crops were secured, prices rose to a great height, and 340,000 persons of the poorer classes died. And this is the most flourishing province in India!

fifth, or forty millions, go through life on insufficient food:" and he admits that "if all the poorer classes in India ate two full meals every day, the surplus for export would be much less than at present." The Famine Commissioners, writing in 1880, calculated the annual surplus at five million tons of food, but Messrs. Caird and Sullivan say that "they are unable to place confidence in this estimate. The average annual export of rice and grain from all India is one million tons, which would thus leave four million tons to be laid by—a quantity sufficient to feed twenty-four millions of people. As famine comes but once in twelve years, there should in that period be an accumulation sufficient to feed nearly three hundred millions; and yet when famine does come, and then affecting, at its worst, not more than a tenth of that number, it is only by immense pressure on other parts of India, and at a quadrupled price, that the barest sufficiency of supplies can be obtained. This seems clear proof that the alleged surplus must be greatly over-estimated." The experience gained during the famine seems, therefore, to support Mr. Hunter's calculation about the insufficiency of the food supply during years of plenty, and this statement,

if correct, proves that the flourishing state of the export trade in grain does not denote the prosperity, but the poverty of the masses. Free trade for England meant cheap food and higher wages ; for India, what is called free trade means higher prices, the destruction of native industries, and the stagnation of wages. "The population," write the above-mentioned Commissioners, "is increasing ; the price of food is rising ; whilst, as the number of the landless class, who depend on wages, is constantly growing, the supply of labour, in the absence of industries other than agriculture, must soon exceed the demand. Already their wages bear a less proportion to the price of food than in any country of which we have knowledge. The common price of grain in the Southern States of America, on which the free black labourer is fed, is the same as that of the Indian labourer, viz. 50lbs. to 60lbs. per rupee ; but his wages are eight times that of the Indian, 2s. to 2s. 3d. against 3d. a day, whilst the climate is much the same in its demands for clothing and shelter. This is a fact of extreme gravity, as illustrative of the poverty of the Indian coolie or field labourer, not to be met by resting satisfied that chronic famine is one of the diseases

of the infancy of nations ; for India, as a nation, has long passed its infancy, and the task of the British Government is, by fostering diversity of occupation, to guard it against decline." They go on to say that, though there is a good surplus of rice, there is only a small surplus of coarse grain—the food of two-thirds of the people of India—to meet a severe famine. I may further illustrate the misleading nature of the inferences which may be drawn from a flourishing foreign trade in grain, by pointing out that in India all increase of taxation tends to stimulate the export trade, and that in two ways. The agriculturist is forced to grow more paying crops, such as indigo, cotton, opium, and the like, instead of grain crops ; or, if he grows grain crops, he grows the finer instead of the coarser, and the market being glutted at the time when the taxes are due, the price of wheat goes down, though still too high for native consumption. Thus the imposition, during the last ten years, of local cesses to the amount of £2,800,000, has no doubt added to the volume of export trade, while the very fact that the railways have brought the foreign market to the door of the agriculturist, has been adduced as a reason why the land-assessment should be raised.

In pursuance of this "merry-go-round" theory, it is quite possible for the State first to stimulate trade by taxation, then to carry off part of the profits of this trade through the medium of the railways, and then to raise the land tax on the plea that the value\* of land is much increased by improved communications. Meanwhile, the lower agricultural classes may be sinking deeper into poverty.

It would take too long to go over all the items of Indian trade, but it may be pointed out that a great part of it is in the hands of the Indian Government or English traders, who naturally absorb the profits.† Thus tea, coffee, and indigo

\* The rise in the value of land in India is continually put forward as a proof of prosperity. But it does not necessarily arise from increased out-turn or profits, but from (1) pressure of population, (2) from the transferability and saleability of property in land permitted by English laws.

† So far as tea and coffee plantations have opened up new land, which would not otherwise have been brought under cultivation, the native labourers are benefited by the existence of a new wage fund; but so far as planters merely get hold of land which would be otherwise cultivated by the natives themselves, the only result is that the latter become wage-receivers instead of independent cultivators. This is what an experienced Bengal magistrate, Mr. C. J. O'Donnell, says of indigo-planting: "Indigo-manufacture depends on indigo-planting, and indigo-planting covers hundreds of thousands of acres with a crop that is ruin to the

plantations are chiefly worked by Englishmen, and the native labourers merely receive a subsistence-wage. The export of these items amounts to £8,000,000 (1881). The opium trade, so far as Bengal is concerned (about £6,500,000), is in the hands of the Government, which retains two-thirds of the price realized at the annual sale of opium chests. So, again, if we examine the imports, we shall find that sundry items, such as railway plant and rolling stock (£1,117,765), are merely a necessary part of railway and other English commercial undertakings, and do not imply any greatly increased demand for necessities, still less for luxuries, on the part of the natives themselves.

The above considerations ought to make us very cautious in arguing from the trade statistics of India, as though they told the same tale as those

farmer to cultivate—hundreds of thousands of acres which are held under the worst form of the ruinous *ticcadari* leases. A large indigo concern ordinarily keeps in cultivation two thousand to five thousand acres, scattered over twenty to fifty villages. The land is hardly ever held with any proprietary right, but is obtained on short leases from the *zemindars*." The *zemindars* and planters are leagued together to oppress the *ryots*. "There is hardly any rent enhancement to which the *ryots* will not submit rather than have their village made over in lease to an indigo-planter." If any one wishes to know why the planters cry out against the Bengal Rent Act and "Ilbert's Bill," let him read Mr. O'Donnell's pamphlet.



of England. The economic conditions of a country whose population is chiefly engaged in agriculture, whose exports exceed its imports by about £20,000,000, are very different from those of one whose population is largely engaged in industry, and whose imports exceed its exports by over £130,000,000. Sir J. Strachey quotes America as showing a balance of trade similar to that of India: but the former is a new country, with a vast extent of virgin soil, and requires population to open up its resources; the latter is an old country, with most of its best land densely crowded. We must not, therefore, be content with comparisons of Indian trade in 1850 and 1880, the period during which the country has been opened up by nine thousand miles of railway; but we must go behind the figures; we must inquire into the conditions of this trade, before we can be sure that its prosperity implies the prosperity of the country as a whole. Such an inquiry seems to show that a great displacement of trade has taken place during the last thirty years, but that this displacement has in many respects thrown the profits of the trade into the hands of Englishmen instead of natives. The latter may have gained somewhat, in

the case of cotton goods, by buying them in a cheaper market, but so far as the importation of foreign goods has displaced Indian labour, which has been thrown back on the soil—this is especially the case in the Bengal Presidency—and has in time of scarcity to be supported by Government out of taxation, there is a very serious set-off against the gains of buying in a cheaper market. If all the persons displaced by foreign competition could find new industries ready to support them, or would migrate to the hitherto uncultivated parts of India, or emigrate to the colonies, then the readjustments necessitated by railways and foreign trade might be effected. But at present neither of these conditions are realizable. The numbers employed, or likely to be employed, by manufactories, mines, and on tea and coffee plantations are but a small proportion of those thrown out of employment, while emigration beyond sea at the most removes a few thousands. “From the testimony received from every part of India,” writes the Famine Commission, “there is reason to fear that so long as the tastes, habits, and temperament of the Indian peasant remain unchanged, no material improvement in his lot will be effected by emigra-

tion." Nor have attempts at colonizing waste parts of India met with any success. The truth seems to be that native leaders are required in the present as in the past, but they appear to have lost their capacity for founding agricultural colonies. The British Government has, by its supersession of native administrators, paralyzed the power of the upper classes to take the initiative; while by its destruction of the various home industries that flourished through the length and breadth of the land, it has killed the intelligence of the lower classes. The result is obvious. The workmen, thrown out of employment by foreign competition, merely become a useless burden on the soil,\* and

\* It would be very interesting to know what amount of natives in India receive wages from foreign capitalists engaged in business not likely to be conducted by natives. The Famine Commission Report and *Moral and Material Progress of India* Blue Books give some figures. Thus, we are told, there are fifty-eight cotton mills in India, partly supported by foreign capital, employing 40,000 persons. There are also twenty-one jute mills in Calcutta, and the number of *employees* for nineteen is stated to be 26,451. Three coal mines in the Hazaribagh district employ 6210 persons, and there are others elsewhere, but the number of *employees* is not given. Then, the tea and coffee plantations employ a large number of coolies; and there are some cloth mills. But, even if we take into account the railway *employees*, there can hardly be more than 700,000 persons employed directly by foreign capital. Against this we have to set the millions of persons who have lost their old

a perpetually recurring tax on the community, except so far as they are carried off by famine and fever.

To sum up, the joint results of railways and free trade may be briefly stated in this way. India used to clothe itself, now England sends clothes, and Indian weavers have lost an enormous source of income, with the gain to the country of the difference in price between English and Indian goods. But to pay for these goods India has to export vast quantities of food, and those who sell this food make larger profits than before. Therefore a certain portion of the community gain by cheaper cotton goods and higher prices for grain. But in order to attain this result they have had to pay the sums before mentioned to build the railways. Besides that, they have to support in years of scarcity a gigantic system of outdoor relief. Is it not obvious that, taking the economic changes as a whole, the country has lost an enormous source of wealth? If the import of cotton to India

industries under pressure of Western competition—aided, be it always remembered, by railways built out of taxation—and have been deprived of the profits of the carrying trade. The cultivators employed by the cotton and indigo planters gain little benefit, and ought not to be reckoned.

and the export of grain from India ceased to-morrow, the Indian people would be the gainers, though the Indian Government would be at its wit's end. In fact, the interests of the two are not identical. The Indian Government is now doing its best to stimulate the export of wheat in order to lessen its "loss by exchange"; but this will only result in higher food prices in India. We now see the explanation of Mr. Hunter's assertion that two-fifths of the people of British India enjoy a prosperity unknown under native rule; other two-fifths earn a fair, but<sup>†</sup> diminishing, subsistence; but the remaining fifth, or forty millions, go through life on insufficient food. And in ten years, according to Mr. Caird, there will be twenty millions more people to feed. Can it, then, be maintained that the material condition of India has been improved by the enormous outlay on railways?

But you forget, replies the opponent of these heretical views, that in time of famine the railway brings food to starving districts. What would have become of the people of Madras, Bombay,\*

\* The great famine in Southern India is spoken of by the Commissioners as "the most grievous calamity of its kind ex-

and the North-West Provinces during the last famine if it had not been for the railways? My reply is, What did become of them? It is true, the railways brought grain; yet they had previously taken it away, and they brought it back at a quadrupled price, and the Government had to spend millions of pounds to enable the peasants to buy it, and even then could not prevent frightful mortality. What has been the native's custom from time immemorial of providing against bad years? Why, the simple method of Joseph in Egypt—that of storing grain. This is what the official report\* on the Mysore famine tells us:—

perienced in British India since the beginning of the century." The increased land-tax assessments in Bombay, the neglect of the tanks in Madras, and the imposition of local cesses, coupled with raising of the salt tax in both these provinces, no doubt largely intensified the sufferings, due in the first instance to drought. We hear a good deal of the rapid recovery of the agricultural population after the famine. Of course, if a dense and over-taxed population gets its numbers largely thinned by famine, the survivors will be in a better state for the time being than they were before. The real question is, does the action of the Government tend to place the best classes of the country in a more comfortable condition, or does it sacrifice the backbone of its peasantry to the more worthless labourers?

\* I do not quote the above as proof that the railways depleted Mysore—there were none there, and the depletion was due to the revenue authorities rigorously collecting the land tax—but to

“The country had suffered in former years from deficient rainfall, but actual famine had been staved off by the consumption of the surplus ragi, a coarse millet, stored in underground pits, from which it is withdrawn in times of scarcity, as the grain will keep sound and good for forty and fifty years.” Only two of the Famine Commissioners, Messrs. Caird and Sullivan, seem to have recognized the importance of this custom. In the above-quoted very interesting appendix to the first part of the Report, they write on the subject of grain storage as follows:—“The food of the people is of the simplest kind, grain, salt, and a few condiments for a relish. The grain is easy to handle, bears storage in pits for many years, and the people themselves grind it as they require it. The pits are made in the ground, in a manner with which the natives are familiar, and cost nothing beyond the encircling ring of baked clay and labour in construction.” It is this storage of grain, the easiest kind of Famine Insurance Fund, that the teachings of plain experience have forced illustrate the native customs. The report I quote from is the Blue Book on the Mysore famine, which goes fully into the causes of that famine. In the Famine Commissions’ Report, administrative blunders are slurred over

the native to adopt throughout the length and breadth of India, though the amount of stores varies according to the necessities of each district.

Since the introduction of railways there is reason to believe that the ryot, tempted by immediate gain, or forced by taxation to sell his grain, is beginning to store rupees instead of food ; but, as he cannot eat his rupees or jewelry, and cannot buy fuel so as to keep the manure for the land, and has, according to the Famine Commissioners, to give in famine times a quadrupled price for his food, it is very doubtful whether he gains in the long run. Anyhow, the landless labourer, who has no produce to exchange for rupees, finds the market price in time of scarcity utterly beyond his means. Then the Government comes to the rescue with relief works, the railways make roaring profits—in fact, famine and war, both exhausting for the country, are perfect godsend to the foreign investor—and the Indian Government complacently holds up its Public Works policy to an admiring and interested English public. It wholly omits to mention that in time past nearly £30,000,000 of taxation have been squeezed out of the country to pay interest charges, and that, if that sum had



been left in the agriculturist's pockets, he might himself have been better able to face bad times, and have helped the labourer to do the same. But Sir John Strachey utterly ignores this aspect of the question; he is quite content with pointing to the relief works, and then insists on the necessity of constructing more railways to meet the next famine cycle. One would suppose that railways proceeded as a free gift out of the benevolent bosoms of British capitalists, instead of being paid for out of the hungry bellies of the Hindoo ryot. The sum of £30,000,000 represents the amount which India has had to pay out of taxation to get its railways built, and then it has paid £15,000,000 (part of which went to the railway shareholders) to keep the people alive, and after all has lost about five millions of human beings. The 1877-78 famine of the North-West Provinces is a case in point. The Famine Commissioners write as follows:—"The calamitous season of 1877 was accompanied by an extremely high range of prices over all India, due partly to the deficient harvest, and partly to the reduction of the food stock through export from the Northern Provinces to the South and to Europe." It is to be noted that

there are two railways running through these provinces, but they did not prevent the people dying to the number of 1,250,000. In the same way during the Bengal famine of 1873-74 \* “ 222,576 tons of rice were exported from Calcutta alone, and

\* The horrors of the Bengal famine of 1770 were greatly intensified by the ever urgent demands of the East India Company for more dividends! Curiously enough, the French famine of the same date was caused by the rapacity of the French Government, and its waste in wars. So in native times wars made a year of drought in India much more serious. As regards the famine of 1874, Mr. C. J. O'Donnell, in a letter addressed to the Marquis of Hartington, entitled, “The Ruin of an Indian Province” (Messrs. Kegan Paul & Co., 1880), wrote as follows:—“Nothing seemed to me more certain, as the result of a careful study of the circumstances that gave rise to the disasters of 1874, than that drought or failure of crops was not the cause of the so-called famine. A thorough examination of rainfall tables established beyond doubt the fact that the rains of 1873 were little short of a fair average, and that the crops that form the ordinary food of the people yielded fair average out-turns in that year. Especially was it evident that rice, which alone failed, was not the food of the poor.” Mr. O'Donnell was sent to compile statistical accounts of the three great Behar districts, and he gives the three following reasons for the fact that one of the most fertile parts of India has become notorious as the scene of frequent famines:—(1) The rack-renting of the tenantry by the landlords, who farm out the rent collections of their estates in parcels to speculating middlemen on short leases. (2) The mismanagement by Government as Court of Wards of the vast estates of the two greatest landlords of Behar. (3) The eviction and oppression of the farmers by European adventurers, for the purpose of indigo-planting, often with the support of officials of the highest local position.

151,597 tons in twelve months, from October, 1873, when widespread failure of the food supply was certain, to October, 1874, when the distress was at an end. As a fact the famine was only averted by the interference of Government at an enormous outlay (six and a half millions sterling) and the importation of 516,000 tons of grain from without." The Orissa famine of 1866 is generally adduced as a proof of the necessity of better communications and large irrigation works. But the Commission states the reason of the great suffering to be that "the food-stocks were low, both because the exports had been unusually brisk of late, and because the people had not been taught by precarious seasons to protect themselves by retaining sufficient stores at home. . . . It was suddenly discovered that the province was bare of food." If railways were introduced into Orissa, just as expensive canals have already been introduced, and taxation were further increased to pay interest charges, the ryot's habits of thrift and foresight would be further broken down. "The structure of Indian society," we are told by the Commission, "is in some ways admirably adapted for common effort against a common misfortune. The ordinary form of life in the

Hindu family makes each individual a member of a corporate body, in whose possessions, rights, and duties, he participates, and to which he is legally entitled to look for assistance in time of need. Even where the legal right does not exist, the moral obligation of mutual assistance is scarcely less recognized. Apart from family ties there are other relationships, such as those of landlord and tenant, master and servant, employer of agricultural labour and employed, alms-giver and alms-receiver, which are of the utmost importance in binding the social fabric together, and enabling it to resist any ordinary strain. There are, too, salutary habits of frugality and foresight, the precious result of traditional experience, which have an all important bearing upon the power of Indian society to pass comparatively unscathed through periods of dearth. Any form of relief calculated to bring these rights into obscurity or destruction, or to break down these habits, by showing them to be superfluous, would be an incalculable misfortune." Is not this the strongest condemnation of the three *R's* of the Indian Government—Railways, Relief Works, and Rates?

But not only have railways helped to deplete

the people's stores, they have also helped to destroy\* the mainspring of their agricultural industry. "It is not too much to say," writes Mr. A. O. Hume, "that one-half of the whole capitalized wealth of ninety-nine hundredths of the whole population of India is to be found in their cattle; it is not too much, I believe, to assume that the value of this cattle, about a hundred millions, falls little if at all short of seventy-five millions sterling." He calculates the average annual loss of cattle in India by preventable disease of one form and another at full ten million beasts. The largest proportion of this loss is due to want of fodder, and want of salt,† and

\* In the North-Western Provinces and Oudh, the railways and taxation have together so stimulated the export trade, that bullocks, which had better be employed in working on the land, are engaged in feeding the railways. That this apparently flourishing state of matters does not imply the prosperity of the peasantry may be seen from the fact that the district officers in those provinces are continually calling attention to the increase of the money-lending class, and of the indebtedness of the peasantry. In Oudh, where very few of the ryots have occupancy rights, the talukdars are able to shift the burden of taxation on the backs of the cultivators, who have to hurry off with their crops to the money-lender in order to get rupees. In the North-Western Provinces, where a large proportion of the cultivators have occupancy rights, it is the landowners—most of them small men, and members of village communities—who are getting over head and ears into debt.

† In spite of the recent reduction of the salt tax to two rupees

the question arises, how far this want of sustenance is due to a large portion of the profits of the carrying trade being absorbed by the railways. What amount of beasts have been displaced by the railways official statistics do not make it possible to discover, but this is what the Famine Commissioners write: "The ordinary carriage of the country consists of carts drawn by bullocks, and generally by two bullocks, and carrying seven or eight hundredweight; but where there is a considerable traffic over a long stretch of first-class roads, it is not uncommon to see two or even four pair of bullocks yoked to carts capable of carrying nearly a ton. In Madras and Mysore the carts are of superior construction, with light, strong wheels of an English pattern; in Upper India they are more clumsy vehicles, with thick, heavy wheels, and

a maund (82lbs.), it is still crushingly high, and in most parts of India higher than it was thirty years ago. Salt was subjected by the natives to petty duties, like other articles, but it was not made a special source of large revenue. Up to 1850, Madras and Bombay paid three-quarters of a rupee per maund; in 1843, the North-Western Provinces paid two rupees per maund. The salt tax was raised very considerably in the Punjab after annexation, and in Sindh in 1878; it was almost *nil* before. Though railways have cheapened the carriage of the best salt, yet many local supplies have been suppressed by the Government, to protect its monopoly.

often with wooden axles, strengthened with iron; in Central India it is still common to see little low carts, with solid discs of wood tired with iron for the wheels. The ordinary rate of freight by cart, when the roads are good and traffic abundant, is from two to two and a half annas per ton per mile, and it is sometimes as low as one and a half annas; in hilly and out-of-the-way tracts the rate often runs up to four and five annas per ton. Some attempts have been made to obtain statistics of the number of carts, but they are very untrustworthy. Almost every cultivator of any wealth keeps a cart in which he yokes his plough bullocks, and brings home the produce of his fields; few villages of thirty or forty houses but will contain ten or twelve carts. The number ordinarily plying for hire is much smaller, but whenever a demand arises an immense number of these agricultural carts will turn out on the road, especially in the season when field work is scanty. As an instance of the extent of the supply may be quoted the fact, that on a single road in the Central Provinces, that from Nagpur to Bhandara, 36,000 carts have paid toll in a single week. In the less civilized and more remote parts of the country pack-bullocks still ply for hire. They

are commonest in Central India, the Central Provinces, the Hyderabad country, and the Western Ghâts of Bombay and Mysore; but their number is small now compared to what it was when almost the whole internal traffic of the country was carried on in this way, and no army took the field without a swarm of these 'Brinjara bullocks' to carry its commissariat." \*

We may gather from the above quotation what an enormous amount of bullock-power must have been displaced by the railways. It is true that railway carriage is three or four times as cheap for long distances as bullock carriage, but then the whole profits of the latter were distributed among the cultivators, while those of the former leave the country. Further, the bullock transport enabled the ryots to keep a larger number of cattle, for either they employed their own animals partly for carriage and partly for cultivation, or else they paid others to keep transport cattle. Where the railways have taken the place of this transport,

\* Dr. Hunter, in a recent speech in the Viceroy's Legislative Council, assigned as one of the causes of the wretched poverty of the Deccan ryot, the extinction by the railways of the great carrying trade by pack-bullocks, partly from north to south, but chiefly down the Ghâts to the coast.



it does not pay to keep cattle idle for part of the year, or if they are kept they must be sadly underfed. Anyway, the land loses a large amount of manure,\* which is the one thing, according to every authority, required for the country. But if it cannot pay to keep so many well-fed cattle as in old days, what is the native to do with the money saved by a *cheaper—but only after he has been taxed to establish a monopoly*—method of carriage? The plain truth is that he can only hoard it, unless the Government, by the imposition of further taxation, is kind enough to relieve him of his burden. Official reports are continually pointing to the vast imports of treasure into India as a proof of the prosperity of the country. But they are, to a great extent, merely a proof of its necessities, the result of economic changes. The import of treasure is in part due (1) to the con-

\* Mr. Hume says that "there is a vast consumption of manure in brick-making, and here the D. P. W. are great sinners. The increase of brick-making, and with it the consumption of dung as fuel—it being in most places cheaper than wood—has been enormous of late years." The Government is now busy with schemes for preserving forests, but it has, in the first place, allowed the railways to destroy them for sleepers, fuel, etc. The perhaps necessary closing of the forests against the natives has recently led to loud outcries in the native press. (See Appendix A.)

struction of railways, (2) to the gradual substitution of payments in money for payments in kind. Year by year the village grain-heap, which used to form the pivot of village life, has been superseded by the rupee-bag of the money-lender. Landlords and labourers who used to receive respectively their rents and wages in kind, are now paid in silver. Not only does the Government's demand for cash payments naturally cause this change, but the increasing export of grain—the old currency—has to be counterbalanced by the increasing import of silver, the new currency. A great part of the treasure which represents the profits of the foreign trade goes into the pockets of the native middleman, not into those of the cultivator, and even when the cultivator does find himself blessed with a small number of rupees, after deducting his land-tax, his share of local cesses and salt tax, what is he to do with them? It might be supposed that he would undertake some agricultural improvements, for he is not so ignorant or stupid as some people make out. This is sometimes the case, but this excellent kind of investment is much discouraged by the fear that a license-tax collector will notice such evident signs of

wealth, or that some local cess will be imposed, or that at some future land-assessment he will have his rent raised on his own improvements. "There is strong proof," writes Mr. Caird, "that even a thirty years' settlement is not reckoned by the cultivator such a security as would lead him to spend any capital he may save on permanent improvements. A man having two holdings, of which one is only a few acres of personal 'imam' land upon which a low quit-rent cannot be raised, will spend all his savings upon it in making wells or other permanent improvements, while he will not lay out a penny in the holding which is liable to future increase of assessment." So the simple-minded peasant makes a pilgrimage by rail, or has a grand wedding-feast, or hides his money in a napkin, and brings it out in some year of scarcity to pay for grain when it is quadrupled in price, and so swell the profits of the railways.

The stereotyped answer to all the above considerations is, that such suffering always accompanies any great changes by which a country advances to a higher civilization; that what is now going on in India is just the same sort of thing as went on in England at the beginning of this

century, when machinery took the place of manual labour and steam superseded animal power. After an inevitable period of misery, India, it is said, will enter upon a great industrial career, and she will thank English statesmanship for the opening up of the country's resources. The analogy is flattering to our national pride, but it is utterly fallacious. The economic revolution which took place in England was the result of indigenous forces, and, as in the case of all external changes which correspond to internal activities, after a period of disturbance during which capital and labour shifted to new spheres of action, a new equilibrium was established. Capitalists who were deprived of the old sorts of investments found new ones offered to them, workmen who found old industries failing, moved to a much larger world of work. But in India the upper classes have lost many of their old sources of income as administrators, soldiers, and public servants of various sorts: while the ryot has no compensating source of income in the new transport service, because the capital is provided for him by a paternal despotism or by foreign investors, and even if small shares were offered him—and they must be

very small—he would probably not invest in them; and the old industries, apart from agriculture, which employed millions all over the country, are being gradually destroyed by foreign competition, which has been actually facilitated by taxes to the amount of thirty millions sterling, squeezed out of the ryot's own pocket to pay for improved communications, euphemistically called opening up the country to free trade. And it is this very impossibility of any economic readjustment—except to a very slight extent through the help of foreign enterprise, which will again reap all the profits—that is the real reason why the construction of railways and the establishment of the keen commercial competition of the West lead to such disastrous consequences. We have dealt with the economic conditions of India as if we could isolate them from its social conditions, we have treated a passive people as though it possessed the most active type of character, we have forced on it a quick-working apparatus suited to a high-pressure civilization, and have then expected that it will work in the most beneficial way. We have treated capital stored up in the shape of caste-bound skill and cattle, and distributed in infinitesimal propor-

tions over a multitude of small husbandmen, as though it were the large accumulations of enterprising capitalists who can shift their activity according to the demands of the industrial market; and we have identified the non-migratory labourer of India with his migratory counterpart in England. Finally, we have treated a country liable to famine, and to a great extent overcrowded with inhabitants, as though it was teeming with surplus agricultural wealth, or had a sparse population with unlimited supplies of virgin soil; and the result of such treatment is obvious—recurring famines and a flourishing export trade in food, costly railways and relief works, supported out of a rigorous revenue system which rack-rents the ryots at the very moment when their rents ought to be suspended. Lord Derby is the only English statesman who ever seems to have appreciated these facts. Speaking in 1857, after his tour in India, he said: “It seemed to be thought that because costly lines of railway were suitable for this country, they were equally suitable for India. He believed, and so did more competent judges, that this was a complete mistake. What was wanted in India was not costly lines for rapid travelling, laid down in

a few parts, but a comparatively inexpensive, though slow, means of communication extended all over India." It is true that Lord Lawrence, who necessarily knew India better than any preceding or succeeding Viceroy, sanctioned Colonel R. Strachey's scheme, but in 1866 he wrote as follows :—"What seems to me of more importance than new lines of communication, is the question of irrigation for many parts of India ;" and, "with the lines under construction completed we should do very well for a time ;" and it seems very doubtful whether he would have sanctioned the reckless railway mania of the present day. "Our main object," he wrote again, "should be to complete the railways in India. There are some lines still to be commenced, but I doubt much whether they will pay, and in our present financial difficulties I am for postponing them all." But even if Lord Lawrence's authority could be quoted for the construction of all the present lines, and of another ten thousand miles of railway, yet it must be remembered that he was primarily an administrator, and not an economist ; that he was too absorbed in the solution of pressing problems to look far ahead ; and that he naturally adopted, though with

considerable reservations, which were seen in his opposition to the repeal of the cotton duties, the generally accepted formula of the orthodox political economy, which preaches the infinite efficacy of foreign capital. Lord Derby, the only English statesman of the highest calibre who has visited India and examined its needs with unofficial eye, saw clearly what the country required: "A comparatively inexpensive, though slow, means of communication extended all over India." Good roads, navigation where possible, and—where it was still found that there was, taking good and bad years together, real waste of produce, or an opening for new industries not otherwise to be brought into being—cheap railways would have provided all that was necessary. As it is, we have first made, in truly Roman fashion, the most splendid and costly roads, such as the great trunk road connecting Calcutta with Allahabad and Delhi; then we have constructed canals on which, though primarily made for irrigation purposes, we have spent thousands of pounds for navigation arrangements; and, finally, have superseded roads and rivers alike by railways, which have managed to under-sell the carriers on the former by the free gift of



£30,000,000 of taxes to get them constructed, and an annual sum of about £1,000,000, reckoned as loss by exchange, to enable them to pay their way ; and distinguished Anglo-Indians, like Sir Richard Temple, regard this fact with the greatest satisfaction. This is what he told the Famine Commission : " The old navigation of the Upper Ganges has fallen off. . . . The navigation of the Indus has greatly developed during recent years. It remains to be seen whether it will be affected by the railways . . . On the western coast of India the navigation by ocean-going country craft is wonderfully great, and flourishes despite the extension of railways. At first it injuriously competed with railways, but of late years the rail is beginning to hold its own."

At present there is a great deal of traffic on the Lower Ganges, Lower Brahmaputra, and the Megna ; but in Bengal, the Bengal Central Company, *aided by a Government guarantee, i.e.* taxation, hopes soon to divert some of the boat traffic on the Ganges, while a line is now being constructed by the State to do the same kindly service for the grain-carriers on the Gogra in Oudh, a densely crowded and purely agricultural province. In the

same way the South Mahratta Line will no doubt be able, by help of its guarantee to be paid out of taxation, to "divert still further the coast traffic," and we shall then be told to congratulate the Indian Government on its development of the resources of the country, the fact being that the trade will be unnaturally stimulated, and the profits taken out of the pockets of native carriers and put into those of English capitalists. When I was in India three years ago, I remember an Oudh civilian translating to me two lines of a popular song, the burden of which was a plaintive wail over railways. Indeed, there is every reason for believing that, if opportunity offered, there would be a serious movement against the railways on the part of the poorer agricultural population. It sees fibre crops taking the place of food crops; it sees food carried off by the railways; it finds prices equalized indeed over a series of years, but by a *levelling-up process*, and wages more or less stationary; it sees native industries destroyed, and manufactured goods taking their place; and, finally, it has a fine feast once in ten years at relief works, when it learns the difference between an empty and comparatively full belly. And what of the classes with interests in the soil? Why, they

have the great pleasure of being taxed during years of plenty to build the "productive" and "protective" railways, and then of being taxed during the years of scarcity to support the relief works, and so they are ground down between the upper and nether mill-stones, and are gradually enslaved to the money-lenders, who are merely the camp-followers of that patent instrument of plunder and devastation, the Public Works Department, and faithfully attend the march of the pioneer-corps as it opens up the country to the mercies of the "Márwári," and preaches the imperial policy of peace "through blood and iron." When the next famine cycle arrives, the expenditure of the Government on relief works will reach an unprecedented sum. It must justify the existence of the railways by saving, or at least trying to save, every possible life, and whence will come the food? The growth of wheat crops, partly in the place of other food crops, partly on the newly cultivated lands of the Punjab, has been largely encouraged by the demands of the European market, but unless the Indian Government is itself willing to feed the masses by means of the most costly food, the wheat supplies will not be available for home consumption. It is true that Turgot

grappled with the problem of French famines by fostering the export of corn in normal years, so as to provide against seasons of scarcity; but the peasantry of France, the wealthiest peasantry in the world, with every inducement to save, are not to be for a moment compared to the ryots, still less to the landless labourers of India.

The forty millions who are now said to go through life on insufficient food, will, during the years of plenty, have their numbers still further increased. The very hopelessness of their normal condition makes them reckless about the future,\* and the substitution of relief works for industrial pursuits is breaking down all their habits of thrift and self-reliance. Railways constructed, I repeat, by means of taxation have destroyed the natural protections provided for local industries by distance and difficulty of transport, and have subverted by force, and without any free assent or any corresponding pre-

\* "The classes that suffer most are the weavers of coarse goods, whose trade has almost gone from them, under the competition of cheap power-loom fabrics, and who are very slow indeed to emigrate or to abandon the handicraft of their forefathers. . . . On occasions we have spent public money in procuring the way for new industries, but the effect of such undertaking is limited, and does not radiate into the rural tracts."—"Despatch of Government of India," July 8, 1880, in reply to Mr. J. Caird's Report.

paration on the part of the population immediately affected, the economic status of centuries. History supplies us with no parallel instance of such a far-reaching revolution imposed from without at the point of the bayonet. We cannot, therefore, derive any lessons from the past exactly appropriate to the case before us, but it is impossible to suppose, human nature being what it is, that such sudden changes in the life of a very ancient civilization can in the long run prove beneficial to its highest interests. "If," writes Mr. Herbert Spencer, *à propos* of the close connection of political institutions and social conditions, "greater modifications are by accident produced, the excess of change is sure to be undone by some counter change." This observation is particularly applicable to economic changes in India. The sudden and general introduction of railways and freetrade is shattering India's social system, and with it all the precious habits of prudence and the priceless feelings of mutual dependence that have enabled its children to weather the frightful storms which man and nature have combined to launch on them. The question which all who care for India's welfare ought to ask themselves is, whether our boasted

gift of rapid communication, as the necessary condition of freetrade, is not undoing all the good which a strong and settled Government has been able in the past to confer on India. A nation does not live by bread alone, but no higher life was ever produced by the sheer pressure of hunger. What is the use of all the boasted blessings of British rule, security of person and property, a just administration, a higher system of education, and the latest inventions of Western science, if the people who only require a little coarse grain and salt, and a few clothes of the roughest sort, are to live on the verge of starvation?

The standing argument against the East India Company was that it was too much permeated by the commercial spirit, that it thought first of its dividends, and secondly of the welfare of the governed; and it was supposed that if India became a Crown dependency, ruled by statesmen directly responsible to Parliament, the proper objects of British administration would be attained. But such sanguine hopes have not been at all fulfilled. The rods of the East India merchants have been exchanged for the scorpions of Manchester and Birmingham. The power supposed to be entrusted

to Parliament as a whole has really passed into the hands of an energetic minority of manufacturers, merchants, capitalists, and planters, interested in developing the resources of the country, which means, to a great extent, appropriating the profits of the internal and external trade. In India and England alike they urge the Government to raise loans for the construction\* of railways, in order that, by the aid of taxation, they may be able to reach the centres of trade up country, and by their superior energy carry all before them. By appeals to the benevolence of the British public, which believes that the horrors of famine will be wholly averted by the help of the railways, they get to be regarded as angels of light, and it is only now and then, when a Criminal Procedure Bill, or an Income Tax, or a Rent Act is proposed by the Indian Government, that their real nature is revealed to the eyes of an astonished nation. But these symptoms of an unregenerate nature are soon forgotten, and the encouragement

\* "Roads, bridges, and railways have been made at the cost of public funds, for the service of tea, coal, and singular industries," is the candid confession of the Indian Government (*vide* Despatch of June 8, 1880), and yet the planters, etc., always cry out against the imposition of an income tax on themselves.

of private enterprise is again preached as the panacea for India's poverty; and, in pursuance of this idea, the Indian Government is gradually losing its character of a paternal despotism, and is being transformed into a despotism unparalleled for rapacity in Indian history. What can be more damning evidence than the growing indebtedness of the peasantry, which has actually made it necessary for the Government to pass an Act like the Deccan Ryots and Jhansi Relief Bills, and to think of itself starting agricultural banks all over the country? When this last measure is carried, it will stand face to face with millions of plundered peasants, and the latter will recognize at last the true author of their miseries. When that hour arrives, the sting of suffering might goad into action the most fatalistic of races. "The matter of sedition," wrote Lord Bacon, "is of two kinds, much poverty and much discontentment. It is certain so many estates overthrown, so many votes for troubles . . . And if this poverty and broken estate be joined with a want and necessity in the mean people, the danger is imminent and great. For the rebellions of the belly are the worst." The present condition of India could hardly be described



in terser terms. At the bottom of the scale are forty millions \* of landless people living on insufficient food, and at the top are the old land-owners, who are gradually getting into debt and losing their land. The usurers, corn-dealers, and middle-men generally are, no doubt, prosperous; and there is a certain proportion of the peasantry, with varying interests in the soil, who are fairly comfortable, but with increasing numbers, and few fresh openings for industry, and burdened with the cost of keeping up the relief system, they too will fall into the hands of the money-lenders. And the Government, wishing to find some scapegoat for the miseries of its rural population, turns on the money-lenders, and, as in the Deccan and Jhansi, devours them last of all after the manner of Polyphemus.

\* See Appendix A.

PART III.  
IRRIGATION WORKS.

“Nec tempore eodem  
Tristibus aut extis fibræ apparere minaces  
Aut puteis manare cruor cessavit.”

VIRGIL.

“THE special peculiarity of Indian agriculture,” write the Famine Commissioners, “is the ingenious and assiduous manner in which water is applied to increase the produce of the soil. Some of the crops grown during the rainy season, and many of those grown in the winter and spring, cannot be raised without artificial irrigation.” They then proceed to give a brief account “of the principal methods adopted for utilizing (1) the rain water ; (2) the water of rivers ; (3) the subterranean springs and waters.”

“The chief manner in which the surplus rain water is made available for irrigation is by storing it in tanks. It is in the south of India that these tanks are most numerous, and are constructed on the largest scale. In Madras and Mysore the ingenuity of man has been employed for many centuries in taking advantage of every locality in which water can be caught and stored, and pre-

vented from running uselessly to the sea. Where a depression exists, with two or three square miles of catchment above it, an earthen embankment is thrown across it; some water is caught by this, to be guided to the fields below, while the surplus escapes, and flows past the flank of the embankment. Half a mile lower down another embankment is formed, and another beyond that, each larger and stronger than the one above it, as the drainage area of supply becomes larger. When the volume of water has become large, the embankment is often faced with stone, masonry sluices are formed in the embankment, communicating with channels, which lead to the irrigated area below; the closing and opening of these sluices, so as to distribute the water fairly and in order, becomes the occupation of a hereditary servant of the tank. The duty of repairing and turfing the embankment, and keeping the stone revetment, the sluices, and channel in order, attaches either to the villagers who benefit by the tank, or to some landowner (the heir, perhaps, of the original constructor), who is remunerated by the possession of rights over part of the land irrigated, or to Government in the case of the larger tanks. Some of these

maybe more properly called lakes. Thus the Sulikere tank in Mysore (in the Chitaldrug district) and the Cambam lake in Karnul, which are probably the largest in India, are forty miles in circumference. The smaller tanks are used only during the rains, and chiefly for the rice-fields, which require a constant and equable supply of water, without any interval; the larger contains a supply for the year, and make possible the cultivation of the later rice—which is sown in December or January, and ripens in April or May—of sugar-cane, and garden crops.

“The same system of tank construction exists, though not carried to such a pitch of excellence, in the eastern part of the Hyderabad State and of the Central Provinces. In Rajputana and Central India tanks are not unfrequent, and some of them are splendid works, made by throwing embankments or masonry weirs across the valleys between hills on either side.” In the other parts of India tanks and ponds are to be found, but not to such an extent as in the above-mentioned provinces.

“Another common mode of obtaining the means of irrigation is to dam up streams, and lead them over the adjoining land by a side channel. This, in the case of the smaller streams, is frequently done

with much efficiency without any intervention on the part of the Government, except for the purpose of deciding and recording the nature and priority of the rights of those who use the water. The larger rivers are, however, beyond the management of individuals or village communities, and here the State has been obliged to step in, and employ the service of its most skilful engineers to control and govern the stream. Something was done in this direction by the native kings of the country before the British rule. The most notable instances are the channels taken off from the Caveri, in Madras, and the canals from the Jumna, in Northern India, and some of the inundation canals along the Indus. But the chief irrigation canals of India have been constructed under the British rule. These are of two kinds—perennial and inundation canals. The perennial canals, again, may be distinguished—first, those which are drawn from rivers high up their course, like those of Upper India ; secondly, those formed in the deltas of the larger rivers, like those of Madras and Orissa.

“The third and most important, because most extensive, method of irrigation is by means of wells. These are in almost all cases constructed by the

agriculturists at their own cost: they can be made in almost all localities. In the alluvial soil of Upper India there is generally a water-bearing stratum averaging from ten to forty feet below the surface, through which the water percolates more or less freely, sometimes bursting up in a copious spring when it is tapped. The well-sinker has no fear here of coming upon rock; his only difficulty lies in the sandy strata he may have to pierce through. If the sand is very fine and contains much water, it can only be pierced by putting down a brick cylinder, which holds up the sand, and sinks by its own weight till the spring is tapped. Such a well will cost from a hundred rupees to five or six hundred rupees, according to the depth to which it is sunk and the diameter of the cylinder. When the strata to be penetrated are fairly solid and dry, the well will stand with little or no artificial protection, and can often be sunk without any brick lining, and, where water is near the surface, at a cost of two or three rupees. Where water is as close as ten feet to the surface, or less, as it is in the river basins and in many parts north of the Ganges, the wells only last through one season, and fall in in the rains." In the Central Provinces,



Berar, Bengal, Bombay Deccan, and Madras, the use of wells for irrigation is much more restricted, but still their number is by no means inconsiderable.

Taking British India, with its 197,000,000 acres of ordinarily cultivated land, it would appear that about 12,000,000 acres are protected by wells (though on this point statistics are admittedly very inaccurate), about 8,000,000 by canals, and about 9,000,000 by less reliable means of irrigation. Wells and tanks may be said to have been constructed almost entirely by native enterprise, and require no skill which is not indigenous to the country. The canals, on the other hand, have been to a great extent\* made by English engineers, and are superintended by a large staff of canal officers.

I shall now proceed to consider the financial and economic results of the Public Works policy, carried

\* Sir J. Strachey (p. 7 of "Finances of India") accredits the whole of the 8,000,000 acres irrigated by canals to the British rule. This is obviously incorrect, as no allowance is made for native works, such as the Indus inundation canals, and some of the Madras works. The Famine Commission gives the following figures:—Ganges Canal irrigates 1,200,000 acres; the Jumna canals, 680,000; the Baree Doab, 250,000; the Agra Canal, 225,000; Lower Ganges, 800,000; the Sone, 240,000; the Madras deltaic canals, 1,683,000; the Punjab and Sindh Inundation Canals respectively, 930,000 and 1,800,000.

out by the Indian Government, under the head of Canal Irrigation. The Famine Commissioners write as follows :—" On the works of irrigation for which capital and revenue accounts are kept, there have been spent, up to the close of the present year—

" Outlay from borrowed funds ...	...	...	£12,679,800
Surplus revenue ...	...	...	7,619,000
			£20,298,800 "

In the Indian Railways Report (1880-81), to which is appended a statement on canals and irrigation, the capital outlay is reckoned at £17,696,348, but this lower estimate is probably due to the fact that the amount of outlay on works only partially completed has not been taken into consideration. Indeed, it is very doubtful whether, in the higher estimate given by the Famine Commissioners, the whole outlay has been calculated. It is admitted that, in the case of the earlier works, such as the Baree Doab Canal,\* which was commenced soon after our annexation of the Punjab, the accounts were very inaccurately kept, and the charges for ordinary and extraordinary (*i.e.* productive) public works were so inextricably jumbled together, that it is quite impossible, at this distance of time, to get at

\* *Cf.* Lord Lawrence's Life, vol. i. p. 403.

the real amount expended. In other cases, as, for instance, in Madras, native rulers had already employed labour before we took the works in hand, and this capital outlay is unaccounted for. Further, as in the case of the railways, the sums paid out of the Budget for interest charges \* before the works began to pay their way ought to be added to the capital account. If these different items were reckoned up, there is reason to think that the capital expenditure would be shown to be considerably larger than the highest estimate which official returns have as yet made. For instance, the Famine Commissioners, *à propos* of the Bengal works, state that the capital spent on the canals in Orissa up to 1st of April, 1878, was £1,750,000; but the Irrigation Committee, appointed by the Commission to go into the whole matter, calculates† the capital outlay, including accumulated interest charges, at £2,294,208. Again, in the official statement appended to the railway report,‡ the capital outlay on the Midnapore Canals, up to end of 1880, is reckoned to be £749,047; according to

\* Interest charges out of "revenue" for Ganges Canal alone amount to £927,821.

† Appendix V. of Famine Commission, p. 124, par. 11.

‡ Page 57 of Railway Report, 1879-80.

the engineer's own statement,\* the capital outlay, up to April, 1878, was £918,951. It is therefore impossible to accept with implicit belief even the higher estimate of twenty millions odd as accurately representing the total capital expenditure on irrigation works.

The following returns are given for 1879-80 :—†

	Capital outlay.	Gross receipts.	Working expenses.	Rate per cent.
	£	£	£	
Bengal ...	4,979,900	110,378	92,176	4
North-West Provinces	5,345,919	403,468	136,251	5·03
Punjab ...	4,316,814	259,767	90,039	3·9
Madras ...	1,720,621	495,422	68,442	28·3
Bombay ...	1,333,694	39,011	28,984	— 1·2

“It will be seen by this statement,” writes Mr. Juland Danvers, “that the aggregate amount of the earnings from canals, after paying the working

\* Appendix V. p. 130.

† In the Indian financial statement irrigation is entered under two heads—(1) those works which pay well; (2) those which pay badly. Thus, for the year 1881-82, we find under (1) receipts from irrigation and navigation, £865,799; receipts from land revenue due to irrigation, £491,220: expenditure £726,386. But under (2) we find receipts, £131,239; expenditure, £789,933. It would be desirable to know the nature of the latter kind.

expenses, was £882,414, being at the rate of £7·9 per cent. on the capital outlay of £17,696,348." As the capital is said to have been raised at only four and a half, there is, according to this account, a clear gain to the Indian Exchequer. The Famine Commissioners, it is true, reckon the capital outlay at £20,000,000, but they, too, manage to get out a clear balance sheet, by adding to the gross returns under the head of increased land revenue due to irrigation works. Thus they write: "The net income of the whole of the works in operation was in the year 1879-80, £1,165,800, which amounts within a very small fraction to six per cent. on the whole capital, including three and a quarter millions on works not yet brought into operation. If ('if' is a conjunction of frequent appearance in Indian accounts) this part of the outlay be excluded, the income is found to be more than seven per cent. on the capital actually utilized. The gross income amounts to £1,687,800, of which £769,100 is received directly in payment for the use of the water, and £918,700 as additional land revenue due to irrigation." Such is the magnificent result arrived at by carefully cooking statistics, and calmly ignoring some of the most important factors

in the problem. Giving up any attempt to get at the real capital expenditure, I will now proceed to examine (1) how the receipts are obtained; (2) the very serious deductions which ought to be made from these receipts.

The most successful irrigation works in the whole of India are the three deltaic systems in Madras, the Godavery, the Kistna, and the Caveri, which are said to yield direct returns of 8·7, 6·5 and 31·7 per cent. respectively on the capital spent on them. The Caveri, which has formed the model for the rest, is an old native work restored, and though the Famine Commissioners assign the above net returns, the Director-general of irrigation\* informed them that "calculations of interest upon outlay would be only misleading in the case of these works, of which the capital account includes no allowance for the labour expended in some cases centuries ago on constructing the various channels of distribution." It is certainly a noteworthy fact that the irrigation work which yields more revenue than that of any other in India is the result of native enterprise, and "was in full operation when Tanjore became a British

\* Appendix V. p. 85.

province." In 1836 Sir A. Cotton, taking a leaf out of the book of native engineers, built the Coleroon dam, whereby the irrigation system was still further developed. Stimulated by the success of the Coleroon 'anicut,' he then proceeded to bridle the Godavery and Kistna in the same way. The works on the former river were begun in 1845-46, and those on the latter in 1850-51, and since they have been in operation there can be no doubt that they have conferred enormous benefits on the country. The engineers have proceeded on principles well tested by past experience, and have not been prevented by any feeling of contempt for an inferior race to learn a few lessons at the feet of native teachers. As regards the indigenous principle of irrigation, we learn the following most instructive facts:—"The regulation of the distributary channels rests generally with the peasant proprietors of the soil, locally termed the *merassidars*. Some of these channels are as much as twenty miles long, and irrigate a number of villages. In such cases there is a well-recognized custom, defined generally in a written document, settling the days and hours during which each village is to take water, and similar rules lay down each man's

turn within the village. An establishment paid and appointed by the *merassidars*, manages the distribution of water to the fields. Complaints of unfair appropriation of water rarely occur, and are easily settled by the *tahsildars*." It will be instructive, later on, to contrast the indigenous with the alien system, the system which rests on the collective action of the village under a cheaply paid headman, and that which rests on the individual pressure of a foreign and highly paid engineer officer.

The absolute failure of the Madras Irrigation Company Canal System forms a striking contrast to the success of the above schemes. The company was formed in 1858, and was authorized in 1860 to raise a capital of one million pounds sterling, under a five per cent. guarantee. On the advice of Sir A. Cotton, who after his success in the deltas seems to have ever since been afflicted with water on the brain, the company commenced operations with the Tungabhadra project. The proposal was to take from this river—(1) a large canal through the Bellary district north of Mysore; (2) a canal from Kurnool on the Tungabhadra to Cuddapah on the Pennair. "Judging from the success of



the works in the deltas, no one," writes the Madras Irrigation Committee, "appears to have doubted that this scheme would prove most successful. The shareholders at home were assured that they might confidently expect a return of thirty-one and a half per cent. on their investments. It is melancholy to have to point out now how fallacious were all these views, and how many considerations were wholly lost sight of that ought to have received the most careful and deliberate thought. The estimates of the costs of constructing the canal and of the revenue to be expected from it, were based on the experience of the deltaic tracts. The difficulty of passing through a rugged country, the sparseness of population, the different character of the soil, and other like considerations were overlooked." The sum of one million was found insufficient to complete even the canal from Kurnool to Cuddapah, which was the first work taken in hand, and the company was in 1866 authorized to borrow the further sum of £600,000. And what is the state of the company now? For every year up to 1876-77 the revenue has fallen short of the working expenses, and advances (amounting to £46,541) have been made by the Government

to the company. Besides this the Government has to pay £50,000 per annum on the original capital, and £372,000 out of the 600,000 is still owing to the Secretary of State for unpaid debentures.\* And what is the cause of this disastrous drain on the State? The answer is hardly credible, but it is given by the Madras Irrigation Committee. "It is too evident," they write, "that water has been brought to a people who do not want it, and will only take it to a very limited extent." How is this? "Of the soil irrigable from the canal a large proportion (probably fifty to sixty per cent.) is the well-known black cotton soil. It is highly fertile, and with very slight ploughing produces in years of ordinary rainfall fine crops of the large millet, known throughout India as *cholum*, *jonna*, or *jowar*. It is the staple food of the people, and the straw is the best fodder for the fine cattle on which they pride themselves. It is true that they consume rice to a small extent, and have far to send for it. If they understood how to grow it too, rice cultivation is the more profitable. But it requires a great deal of manual labour, and is considered locally

\* The company's undertaking has recently been purchased by the Indian Government for £1,763,500.

to need a great deal of manure, which they cannot always command. It is a new thing, and therefore a distasteful thing, and its straw is an inferior fodder. This is the main reason why the Kurnool has been such a failure. Had its cost not exceeded the original estimate (£415,250) even then it would not have paid the guaranteed interest for many years." And what does Sir A. Cotton, the projector of this scheme, say in his latest pamphlet,\* except that it is all due to bad management and want of water, and that the difficulties will be got over some day? Till that very distant time arrives it is as well to remember, in the face of Sir A. Cotton's proposal to spend something like £50,000,000 within the next twenty years, that at present the area of wet cultivation watered by the canal opened since 1871 reaches only 14,000 acres, instead of between two and three hundred thousand as estimated. The only bright feature in the project is that in the famine of 1876-77 66,901 acres were watered; but it is very questionable whether, even if in time of famine 200,000 acres were irrigated, the drain of the ryot's grain, which in the years of plenty has to help to pay for the

\*. "Public Works in Madras," by Sir A. Cotton, 1881.

works, does not take away more than the canal gives in the years of scarcity. It must never be forgotten that, as I have pointed out before, the Indian cultivator has from time immemorial been accustomed to store food against bad times, and each additional item of taxation, such as the raising of the salt in Madras from three-quarters of a rupee in 1850 to two and a half rupees in 1880, and the local cess of 546,000 imposed on Madras in 1871, makes it more difficult to practise this thrifty habit. From the time the Madras Irrigation Company was started, up to the year of famine 1876-77, it cost the Indian Government £800,000 in interest charges, £372,000 in debentures, and £46,541 in working expenses; altogether £1,218,541. The question is, how much had the ryots, who during famine paid from two to six rupees an acre for their water, already paid in the shape of exhausting taxation? Truly, the local cess of 1871 might be called a Famine Insurance Fund in the sense that it insured its horrors. We ought to congratulate the company on the £24,819 which they squeezed from the ryot during the famine, after having already got nearly a million and a quarter from the general taxation

of the province. What a debt of gratitude the starving ryot owes to British benevolence, for having been allowed to pay one million and a quarter sterling to water 66,901 acres during five months ! Why, the six engineers in charge draw £6,108 per annum, one-fourth of the whole sum earned during the most—to the company—favourable year. And this is what we call opening up the resources of a country which is only waiting for the application of Western science to be turned into a Garden of Eden—or a Golgotha.

But it is not merely the utter fatuity of this new-fangled scheme of Western engineering that has to be pointed out. The neglect—consequent on this outlay—of the ancient and well-tried irrigation works of the country is a still more disastrous consequence of this waste of money. “Much of the irrigation of the Madras Presidency,” write the Famine Commissioners, “is effected by means of petty irrigation works, tanks and channels or watercourses fed from tanks, and the account given of the condition of these is by no means satisfactory. In former days they were, to a great extent maintained by a system of contributed or statutory labour, the Government being held liable

only for any considerable work of improvement or restoration, and the ordinary petty yearly repairs being done by the population interested in the irrigation. In 1856-57 the duty of initiating tank repairs was transferred from the revenue officials to the reorganized Public Works Department, without, however, the power, which had been enjoyed by the Collector, of enforcing statutory labour. Since that time the ryots have taken less and less part in the maintenance and repair of tanks and channels. On the other hand, the Public Works Department, though spending considerable sums annually in the repair of particular works, have not been able to carry out all the necessary restorations; and there are many works which have fallen out of order for want of proper supervision and timely repair." "In Madras," writes Sir A. Cotton, "there are about forty thousand tanks. They are a wonderful proof of the intelligence and enterprise of the natives in former times. Some of them are known to have been constructed about our era." And these are the works, irrigating thousands and thousands of acres, which have been allowed to a great extent to go to ruin, while a million and a quarter sterling

has been spent on the irrigation of—on an average—sixteen thousand acres. And what, apart from want of funds, is the reason given for the destruction of these valuable tanks? A very simple one: the contemptuous indifference of engineers to such petty works, and the non-enforcement of native customs. “It is a singular feature,” writes Mr. Arundel, magistrate of Coimbatore, “of the centralizing tendency of our bureaucratic rule, that the village communities have lost much of the power of self-rule and self-help they formerly possessed. The native jury system, the *punchayet*, has been rudely shaken. The decisions of such a body, if ever it sits, no longer bears the old authority, and for the upkeep of irrigation works the *punchayet*, or native jury, cannot be relied on. . . . But the communal labour, though it has languished almost everywhere, and is in many places almost in a state of suspended animation, has never completely died out, and exists in various forms and various degrees in different parts of the Madras Presidency. . . . It flourishes with the greatest activity upon works such as temporary drains in river-beds and river-fed irrigation channels, where the expenditure of time, money, and labour is

greatest, and where the neglect of common duties is immediately followed by common loss or common ruin. It has become most lethargic as regards rain-fed reservoirs, where only a trifling expenditure of labour is regularly needed, and where the results of neglect are not immediately felt." Mr. Arundel proposes that the communal labour should be re-established under the supervision of the district boards, established a few years since by the Local Fund Act. Certainly it is this method, coupled with some reduction of the land tax to encourage tanks, *not* some local cess to be placed in the hands of the Public Works Department with all its expensive machinery, that offers the best hope in the future for restoring the old irrigation works which have helped to stave off drought in the past.

The heavy losses entailed on the cultivators and the Government by the omission to repair the tanks may be judged of by the following instances, taken from the memorandum of the magistrate of Coimbatore:—"The irrigated lands left uncultivated during 1875-76, owing to causes beyond the farmer's control, amounted to 240,000 acres, and the assessment thereon (£105,000) was remitted by the Government. In addition to this, a sum of



£119,000 was remitted on account of causes arising entirely from deficiency of water. Of this amount (£224,200) a large sum, difficult to estimate, but certainly reaching to some tens of thousands of pounds, would undoubtedly have been saved to the public revenues, and a sum more than twice as great to the wealth of the country under an efficient and economical distribution of water from all the State irrigation works throughout the country." Further, the area left uncultivated, owing to causes within the farmer's control (or rather causes within his control if there were enforced statutory labour), was 186,000 acres.

The Government in this case did not lose anything, for it collected the wet assessment (£57,800) as usual, but the ryots were entirely out of pocket to that amount, though it is difficult to see with what justice the village headmen are held responsible for enforcing customary labour and protecting water channels when the Government has itself allowed the former to lapse, and injury to the channels can only be prevented by an injunction or civil suit, and is not punishable under the penal code. The truth is, that ever since these works were handed over, in 1856-57, to the ex-

pensive machinery of the Public Works Department, the excellent and economical old village customs, up to that time maintained by the influence of the English magistrate or native *tahsildar*, have fallen into desuetude. "Why should the ryot stop holes or cut down prickly pears," asks the above-mentioned officer, "when Government was going to do all that for them?" On the other hand, the D. P. W. establishment works with the greatest irregularity; "the Government allotment for repairing a channel, removing sand, silt, weeds, etc., is not a fixed annual amount, but is liable to vary with the demands for repairs elsewhere, and with the condition of the Imperial exchequer" (*i.e.* guaranteed interest for railways and Madras Irrigation Company must be *regularly* paid up), "which ruthlessly cuts down the allotment for a whole district or Presidency when the financial equilibrium of the Empire is uncertain." The allotments are often made at intervals of years, whereas a small sum annually expended is all that is required. The revenue authorities and the engineers spend their time in quarrelling with each other as to whose duty it is to conduct the repairs, and nothing is done. The Madras famine throws a lurid light

on these matters. It is the history of dual control all the world over.

There is no better instance than Mysore of the fate which befalls a country when it has once got into the hands of the Public Works Department and general red-tapism. During the last eighty years Mysore has experienced three kinds of government: (1) native rule, 1799-1811, under the famous Brahmin Pirnia, assisted by three English officials; (2) European supervision, 1832-1857, under the able hand of Sir Mark Cubbon, assisted by four Europeans; (3) bureaucratic routine, 1857-1880. I shall compare briefly these three periods. Pirnia, at the time of his dismissal by the young rajah, left a surplus of two crores of rupees in the treasury, which was squandered by the profligate young rajah. Sir Mark Cubbon, though reducing taxation to the extent of eleven lakhs a year, increased the revenue from forty-four to eighty-two lakhs (£820,000), and left a surplus of a hundred and two lakhs of rupees. Small works of irrigation, suited to the wants of the people, were alone encouraged, and were carried out by the natives themselves. Though the province suffered from time to time, owing to the want of rain, yet it

always managed to tide over bad harvests without any disaster. With the departure of Sir Mark Cubbon all was changed. Under the Dalhousian zeal for progress, the European agency was gradually increased, entailing an expenditure of £90,000 instead of £13,000; a public works department was established; the opinions of the civilian staff, the requirements of the country, and the needs of the people were ruthlessly set aside, and the surplus disappeared. In 1863 the Bombay settlement officer appeared on the scene, with all his rigorous and vigorous assessment ideas. He soon frightened away the village headman, "who" (I quote from the report of the Mysore famine, pages 8-10) "used to be the father of his village; the connecting link to prevent the disintegration of the ryotwari system and the dispersion of the ryots; the man to whom the ryot looks for a loan if he is unable to pay his revenue, and the labourer for an advance of food if employment is slack and his stock has run out." The old *amildars*, or native officials, well known to the people, and knowing them well, were superseded by Madras B.A.'s. Such was the state of Mysore when the terrible famine of 1876-78 began to afflict the

country. What happened we may learn from the Famine Report. It is a hideous story. Before the famine actually set in in all its horrors, the land tax (the surplus in the treasury being exhausted) was rigidly exacted, so that the stores of grain and bullion were exhausted; and when, at its height, the Government was actually spending thousands of pounds, the ryot was being sold up and coming on the relief works—relief works for which the Indian Government is always taking credit. The famine cost the State 110 lakhs of rupees, *i.e.* more than a year's revenue; the people lost nine million and three-quarters sterling in produce, a quarter of a million in cattle (the Forest and Revenue Department refused at first, though petitioned by at least one district officer, to open the fodder preserves), and more than one million lives, *i.e.* a fifth of the whole population. And what was the Public Works Department doing all this time? The Famine Commissioners shall tell us:—"The upland plateau of Mysore, from its nature, contains no very extended drainage basin, nor great plains, such as are met with in other parts of India. Its surface is a succession of hill and valley, and the ingenious method in which each valley was made

to contain a chain of irrigation tanks, and each river to feed a series of irrigation channels, left the British officers, who administered the province, little to do but to put the old works in thorough repair. The long economical rule of Sir Mark Cubbon left (i.e. in 1857) an overflowing treasury, and, after much discussion (this seems to have lasted about thirteen years !), in 1873 the accumulated funds were ordered to be applied to the systematic restoration of the irrigation works. (The question is, When did they get out of order ?) Unfortunately, too much was attempted. (N.B.—This is very characteristic of the D. P. W.) On the Mysore registers there are nearly 40,000 tanks, of which 28,000 yield a net revenue of less than fifty rupees apiece. It was proposed to restore all, even the smallest (here is a grand scheme !), but experience has proved such a restoration to be quite impracticable. Up to 1878 only some of the tanks in two of the eight districts had been restored . . . and in Kolar, the district in which most had been done, it was estimated that to complete the whole district would cost £700,000," (that is to say, if the expensive machinery of the D. P. W. were to be employed), "and occupy thirty

years. Mysore has now exhausted its resources in its struggles with the late famine" (or rather with the Bombay settlement officer), "and the expenditure for the future must be controlled most carefully. It would be unwise policy, however, to neglect works on which the very life of the province depends."

Let us thank heaven that, in spite of Lord Lawrence's weighty authority, it was decided by the Secretary of State for India to allow Mysore to revert to native rule, and so get out of the clutches of the Bombay settlement officer and the Public Works agency. As in the case of Madras, the native custom of statutory labour has fallen into disuse, but "the sooner," write the Famine Commissioners, "it is revived, the better." And so, after all the terrible, and to a great extent avoidable, suffering inflicted by experiments of every sort on this country, which twenty years ago was in the most flourishing condition, the utmost that the Famine Commission can suggest is, that *we had better revive native customs*. Truly a lesson of deep significance to a Government which justifies its existence on its superior enlightenment! It is certainly curious to find the Commission advising

(in 1880) "The Indian Government, before handing the province over to the native rulers, to draw up a project specifying what tanks are to be restored at the expense of the State, with an estimate of the cost in the order in which they are to be taken up." I do not know whether Lord Ripon's Public Works secretary has been kind enough to make any suggestions on this head. It is to be hoped that he has not done so. All I notice is that there has lately been nearly one quarter of a million sterling spent on thirty-five miles of railway running up to Bangalore, to be continued eventually to Mysore, and then on through the northern districts to Dharwar. If the Bombay settlement system is allowed to gradually throw all the ryots into the hands of the moneylenders, a process going on very rapidly in 1879, according to Mysore Famine Report (pages 8-12), the railway ought to pay most splendidly, as the export trade will be largely stimulated in normal years by a highly assessed land tax, and in times of scarcity the Mysore Government will be forced by the Imperial Government to raise a loan to feed its starving ryots. It is to be hoped that the shares of this railway are held by the Mysore Government or natives of



Mysore, so that at least the profits may be kept in the country, otherwise it will be drained of its bullion and grain stores. Perhaps twenty years hence it will be discovered that railways in Mysore and Madras are too exhausting, and that we had better "revive native customs," in this case those of storing *ragi* in pits against bad seasons. So impressed were two of the Famine Commissioners, Messrs. Caird and Sullivan, by the reasonableness of this custom that they actually suggested that the State should store grain in inaccessible parts of India. But the easiest way of doing this is not to deplete the cultivators' own stores, even in accessible places, still less to diminish the out-turn of the land by neglecting to keep in repair irrigation works, which have been proved to be the best adapted to the country.

The above account of the Madras irrigation works will, I think, have clearly shown that they have been successful only where they have been conducted on native principles ; that the most Western science can do is to suggest slight improvements in the construction of dams and sluices ; that if a large increase of land revenue is due to some few big irrigation works, a very large decrease is due to the

neglect of an enormous number of petty works ; and that, finally, the only kind of work absolutely originated by British engineering science has proved a most disastrous failure.

When we pass on to Bengal, we find the history of the Madras Canal repeated: "The canals of Orissa and Midnapur were begun in November, 1863, by the East India Irrigation and Canal Company, and were taken over by the Government on the 1st of January, 1869, on payment to the company of £1,040,050. This was a very liberal payment. The company's £20 shares were not then worth more than £16 in the market, Government bought them for £21. A compensation bonus of £50,000 was paid to the company's officers, besides £57,000 on account of home charges for direction. The works were not intrinsically worth more than £700,000. . . . If it were possible (which at present it is not) to obtain one rupee of net revenue for every acre watered, it would be necessary to irrigate 175,000 acres simply to pay the interest of the money paid to the company over and above the value of the property bought." Since taking over the works, the Government has spent over two millions sterling on the two canals. The

accounts for all the Bengal canals were, in 1879-80, as follows :—

	Capital outlay.	Interest at 4½ per cent.	Working expenses.	Gross receipts.	Result.
	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.
Orissa ...	2,29,91,691*	9,34,626	2,08,694	2,65,000	— 9,78,320
Midnapur	91,89,516*	4,13,528	2,03,797	1,70,093	— 4,47,232
Sone project ...	2,45,33,985†	11,04,029	3,57,310	5,31,590	— 9,29,749
					—23,55,301

The failure of the Orissa works is ascribed by the Famine Commission<sup>1</sup> to bad management and insufficient expenditure, and they suggest that if the capital outlay be increased to £3,110,000, so as to irrigate 800,000 acres (they now water 188,000), the cost per acre would be diminished by a third. This may be true, meantime the country is to be further taxed by imposition of “an owner’s rate,” and such taxation, together with the Bengal cess, will have, for many years to come, to pay interest

\* The accumulated interest charges up to April, 1878 (52,10,789 + 21,87,743 rupees), are included, but not the capital outlay, if any, since that date.

† The accumulated interest charges up to April, 1877 (27,74,095 rupees) are included.

charges. Of the Midnapur canal, now completed, the Irrigation Committee write as follows :—" Were it a question of introducing irrigation for the first time into Midnapur, Government would probably have no difficulty in deciding against it. . . . The question arises, whether it is worth while to continue its maintenance, and whether it would not be better to dismiss the irrigation establishment altogether, and use the canal exclusively for navigation, the returns for which were in 1878, 1,06,917 rupees, as compared with 53,483 rupees for water rent. So much for the outlay of 91,89,516 rupees !

As the Sone canal system is not yet completed, it is too early to state whether it is successful or not, but the methods taken to make it pay are very instructive. It is calculated that it will water eventually 1,100,000 acres, but it is candidly remarked by Colonel Haig, the chief engineer, that " the area under the Sone canals includes at least 500,000 out of the 600,000 acres watered by wells, *as the ryots* " (the italics are mine, as I shall refer to this point later on) " *universally abandon the wells for the cheaper canal water, when they can get it.*" It is further remarked by another engineer, that rice irrigation was practised in Behar before the con-

struction of the canals, by holding up the water in hollows by long low embankments locally termed *aháras*. They exist all along the drainage depressions, but are falling into disrepair as irrigation extends. Still, the cultivators try occasionally to fill the pools behind the *aháras* by canal water; and to irrigate it at their pleasure, evading canal rates by saying that it is rain water. At first sight, it would appear a good plan to accept these as affording ready made facilities for irrigation which the people are accustomed to. But everywhere in North India it has been found that irrigation must sooner or later be accompanied by drainage" (this entails further outlay), "or the land becomes waterlogged: while these embankments last, thorough drainage is impossible. So the canal officers are doing wisely in setting their faces against the use of *aháras*." Is it possible to conceive a more conclusive instance of impertinent and unnecessary interference with native ways, and all to make a canal pay which was obviously not wanted at all, as there were natural tanks and wells. And then, when the canal is ready, we are told that there will be further expenditure on getting rid of the water which has swamped the land! With regard to the

charge for interest, together with the loss on the working of these three canal systems, Colonel Haig is equally frank. He says it is provided for by the Bengal Public Works Cess, and therefore "it is not necessary to take into account, in calculating the cost of irrigation in the future, the accumulated interest and working expenses of past years." That is to say, if the canals do not pay, and the natives do not want them, yet the Bengal Cess, *i.e.* taxation, will make them a success, and force the ryot to take the *now* "cheaper water." The engineers will get the credit for saving the country from famine, on the strength of which it is proposed to make another canal in North Behar, although it is confessed that "there are really no reliable statistics whatever of the areas in Bengal protected by wells and tanks." But, so far as anything is known of North Behar, it is stated that in Sarun, Chimparun, and Tirhoot "the spring level is much nearer the surface than in South Behar, being from ten to fifteen feet only below ground," and this is the district in which a canal is to be made, to irrigate 1,100,000 acres. When the ryot has paid the local cess, and canal water is offered at one and two rupees an acre, no doubt it is *cheaper* to use canal, and not well water ;

but this only means that the ryot's wells are under-sold by the Government water-works, which have been paid for out of his own purse. He becomes the victim of a monopoly. If the Bengal ryot had protection for his agricultural improvements, would he not be able to make his own irrigation works? As it is, the great mass are at the mercy of the zamindars and the Government.

The returns for the irrigation works of the North-West Province are much more favourable than for those of Bengal.

The figures are as follows :—

	Capital.	Revenue.	Working expenses.	Interest.
	£	£	£	£
Ganges Canal ...	3,024,541	357,457	107,496	136,103
Agra Canal ...	777,155	42,151	21,684	34,971
Lower Ganges Canal, only just finished ...)	1,543,219	5,860	7,071	69,444

These figures appear to demonstrate the signal success of the North-West Provinces canals. But there are some very serious deductions to be made. The past interest charges for the Ganges Canal alone amount to £927,821, and to this we have to

add the still accumulating charges for the other two. Secondly—and this is a still more serious set-off, affecting alike the North-West Provinces and the Punjab—there has been a great loss of land revenue owing to increased exudation of *reh* or saline efflorescence, in many of the canal-irrigated districts. This is what Mr. A. O. Hume writes: “In Oudh, the Punjab, and the North-West Provinces the soils contain an appreciable admixture of saline particles. With the construction of high-level canals the subsoil water-level is raised, the surface flooded, the earth yields up its soluble salts to the water, which again restores them (but on the surface) as it passes in vapour. At first the result may be good, and marvellous are the crops that have been raised in the Doab on the first introduction of canal-irrigation, owing to the first slender doses of potash and chloride of sodium. But nature works on blindly and unceasingly. The water below searches out one by one each soluble particle in excess of the particular soil's capacity of retention, and, as it slowly creeps up by capillary attraction, leaves these ever behind it on the surface. Time passes on; some crops begin to be unprofitable. In the hottest time of year a glimmer



as though of hoar frost overspreads the land. . . . Along the little old Western Jumna Canal thousands of fields are to be seen thus sterilized. Along the course of the mighty Ganges Canal,\* a work as it were but of yesterday, the dreary, wintry-looking rime is already in many places creeping over the soil. . . . The time must come when some of the richest arable tracts in Northern India will have become howling saline deserts." And this terrible fact is admitted by the engineers themselves. Thus Sir Andrew Clarke, late Public Works Minister in India, writes of the "vast *oosur* plains, within easy reach of the canal, lying waste and barren," and the white patches called "*reh*." "They represent a serious loss of revenue to Government, the *reh* especially so, for it is found to spread in a most alarming way with the extension of irrigation."

\* In a despatch of the Marquis of Hartington's, dated January, 1881, I find the following significant paragraph:—

"Among the additions to the original project found necessary here, as the papers provided show, extensive works for the drainage of tracts through which the (Ganges) canal and its branches run. I especially desire that the periodical reports of the Irrigation Department should show, in a condensed statement, what results have been attained by these drainage works in the reduction of water-level in saturated soil, in the diminution<sup>d</sup> of that saline efflorescence which has been attributed to the action of the canal water in low land, and in the improvement of local health.

If, then, the canals have helped to cause this serious loss of revenue, why does not the loss of land revenue, as well as the gain of land revenue, appear in the canal accounts? Within the last few years a sum of £500,000 has been added, under the head of enhanced land revenue, due to irrigation works, but there is no set-off reckoned at all. Further, it is asserted, on the authority of Sir George Couper,\* late Lieutenant-Governor of the North-West Provinces, that “there are some canals that ought never to have been constructed, to defray the cost of which the agricultural wealth of the country has been drained” (the Local Cess Act of 1869 imposed £391,000 on the North-West Provinces). The fact is, as a perusal of the Blue Books clearly shows, that over a great part of the North-West Provinces and Oudh, the water is not very far below the surface, and if canals are carried through these districts, there is always great danger that the water will be drained away from the shallower wells. As an instance of the harm which may be done, we are told that “the construction of the Lower Ganges Canal, for a length of seventy-six miles through a country

\* Appendix V. p. 95.

already most lavishly supplied with means of irrigation, was only prevented by the care and foresight of Colonel Brownlow." He was then—fortunately for that district—chief engineer of the North-West Provinces, and is an officer well known for his abhorrence of speculative schemes of irrigation. *O si sic omnes!* The question is, how many wells have in dry seasons been drained, and—for this is another charge against the canals—how many acres have in wet seasons been water-logged by the canals running across the lines of drainage? If these three items—loss by *reh*, loss by well-drainage, and loss by water-logging of land—be deducted from the revenue of the canals, their net earnings would sink to a very small sum. But, reply the engineers, "the canals perform yeoman service in the years of drought. During the years 1877-78, the irrigated area was 1,461,000 acres, and crops to the value of £3,000,000 were raised, which would otherwise have been lost." But as canals have made it necessary to impose a local cess, have spread *reh*, and injured wells, the gain to the peasantry during one year of drought is largely counterbalanced by their loss during the nine years of normal rainfall. "In ordinary years," writes

Mr. C. A. Elliott, the secretary of the Famine Commission, "the normal rainfall in the North-West Provinces is sufficient, unassisted, to produce grass and fodder, and to bring the kharif (*i.e.* autumn) crops to maturity. Only in years when there is a failure of rain—say, once in ten years, at the outside—would canal water be of great use to the kharif food and fodder crops; in the other nine years, it would generally do harm rather than good, if admitted into the fields." Why, then, should the peasantry be forced by taxation to provide canals? The serious drawbacks to canal-irrigation are so well known to district officers in the North-West Provinces and Oudh, that during the last few years attention has been chiefly paid to the best means of increasing the area of well-irrigation, and canal schemes are in bad odour. Nearly six million acres in the North-West Provinces and Oudh are already irrigated by wells, and it is found that where water has to be got by lift and not by flow, the cultivator is careful not to use more than is absolutely necessary.

The cultivated soil of the Punjab and Sindh is *par excellence* the gift of the rivers and canals. In the southern parts of the former province, the

water is too deep below the surface to be raised by a well, and the rainfall is so scanty, even in the best of years, that it cannot be relied on for irrigation purposes. Native rulers were well aware of the necessity of utilizing the rivers. The canals taken from the Jumna, and the inundation canals along the Indus—the latter watering 1,800,000 acres, and cleared by a system of contributory labour—are evidence of native enterprise. The two great works of English engineers are the new Baree Doab Canal, designed by the present Lord Napier, and the Sirhind Canal, fed respectively by the Ravee and Sutlej.

The following returns are given for the year 1879-80:—

	Capital.	Revenue.	Working expenses.	Interest at 4½ per cent.	Net Profits.
	£	£	£	£	£
Western Jumna Canal ... }	691,940	140,638	43,624	31,137	85,877
Baree Doab ...	1,494,937	119,129	46,415	67,272	5,442

During the famine year of 1877-78 the Baree Doab and West Jumna canals are calculated to have saved crops to the amount of £1,438,000, an

amount equal to about two-thirds of the cost of the works. The Sirhind Canal, which runs partly through native and partly through British territory, has only been recently completed. With its total length of 502 miles, and its 2,500 miles of channel, it is intended to irrigate 522,000 acres in British and 261,000 acres in native states. The total cost is estimated at over £4,000,000, about two-thirds being defrayed by the British Government, and one-third by the Native States of Paliāla, Jhind, Nabha, Maler Kotla, and Malagarh. The management of the internal distribution of the water is to be left to the village communities, Government interfering only to advise or prevent wilful waste. It is to be hoped that the canal will prove a real blessing to the Punjab; but the note of warning, struck by Lord Ripon in declaring it open, points to serious dangers ahead. "I am," he said, "a warm friend of irrigation, but I must express my belief that it is possible to have too much of a good thing. . . . It is found that, although for a few years after the opening of a new canal the increase of fertility of the irrigated soil is great and striking, a time comes when the crops begin to fall off, and the land commences to

show signs of decline. Why is this? Because an excessive use has been made of the water, and too exclusive a reliance placed upon it. Water is not a substitute for manure as a restorer of the powers of the soil." The truth of these remarks has been exemplified along the course of the Western Jumna Canal. This canal was in part built in native times, but is said to have been disused on account of *reh* appearing on the lands irrigated by it. English engineers have not only reopened the old channels, but they have also built new ones, and the *reh* is spreading along both. The attempt is now being made, by an expenditure of three-fourths of a million on drainage works, to remedy this state of matters; but at present there is a serious loss of revenue, which ought to be deduced from the net earnings, now reckoned at fourteen per cent. on the capital outlay. Anyhow, till the *reh* difficulty is satisfactorily solved, it seems absurd for the Famine Commission to propose a further extension of the Western Jumna Canal through the districts north-west of Delhi.

The account given of the Ajmere irrigation works, wells, and tanks is most instructive, as contrasting the native and D. P. W. methods of

procedure. "Irrigation," writes an experienced officer, "in most parts of the district would, however, appear to have been developed to the utmost extent desirable. It is, indeed, a question for consideration whether there is not already too much irrigation in some places. The irrigated land is in excess of the manured, and the result is a deterioration of the soil where the water is at all brackish." The tanks, some of which were made some thirty years ago by the energy of Colonel Dixon, do not directly pay, on account of the *excessive cost of maintenance by the Public Works Department*. "It is," writes the above-mentioned officer, "as though the roads and buildings branch of the D. P. W. were employed to a large extent in repairing village huts. Most of the tanks (the small ones) can as easily be repaired by the villagers as their wells; these tanks were mostly made by them. The larger tanks only require professional supervision. All the revenue is swallowed up in maintenance under the present system. In Colonel Dixon's time" (*i.e.* before the regular D. P. W. appeared on the scene) "the zamindars assisted in the construction of tanks, and in many instances wholly constructed their tanks.



Of late years it has been held to be the duty of Government to do the repairs, and the liability of the villagers is gradually being forgotten. . . . Formerly the villagers were encouraged to help themselves, now they look to Government to do everything for them. The system is gradually tending to drive all energy and enterprise out of the people, and to make them perfectly helpless in time of difficulty." The objection to a tank system being further extended is that when water is obtained by flow, instead of by lift, as in the case of wells, the peasantry become less industrious. The villagers need to be encouraged to help themselves, and the performance of certain duties insisted upon. "Well-irrigation should be stimulated by offering every inducement for its extension. Greater facility in obtaining suspensions of the Government demands in bad seasons, or for other sufficient and special causes, would be considered a great boon, and tend more and more to relieve the cultivators from debt."

Much the same language is used by the district officers of the Central Provinces, where bureaucratic interference has not yet had time to destroy native enterprise. "For my own part," writes Mr. G. J.

Nicholls, the Commissioner of Excise, "I think that the people, if *taccavi* (*i.e.* loans) could be obtained more easily, and were to be collected rather less stringently, would do all that is requisite for themselves. . . . I am inclined to think that the first effect of the introduction of any Government irrigation system would be to concentrate the population on the parts affected, and for a considerable time to throw back the spread of cultivation, to check the formation of habits of enterprise and frugality, and to lower even further the standard of industry and independence of living." The truth is that the country suffers more from excess of rain than drought, and the black soil is very retentive of moisture. The natives are well aware of these facts, and seem to have provided, or to be willing to provide, all the irrigation works requisite. But, in spite of this, the Central Government engineers have been continually urging the necessity of canal-irrigation, and have with difficulty been prevented from having their way.

In Bombay the Government Irrigation Works have been an utter failure, and that part of the local cess of 1871 (£217,000), which has gone to pay their interest charges, might have been left to

fructify in the pockets of the ryots, or satisfy local wants. "Up to the close of 1877-78," write the Famine Commissioners, "the outlay on these schemes had been £1,280,000. . . . It is calculated, putting aside two incomplete schemes, the canals during 1877-78 earned the net sum of £5,380, or 0·45 per cent. on the capital outlay, an insignificant contribution towards the yearly accruing interest debt of £47,000. In the famine years of 1876-77 and 1877-78, 17,000 and 24,500 acres were irrigated; but in 1878-79 the area fell to 15,400 acres. At present they must be regarded as a small and moderately hopeful experiment" (this is certainly a very curious conclusion); "but at present they are on the debtor's side of the accounts. They have a capital debt of over one million, an accumulated interest charge of £249,000, a deficit on working expenses since the outset of £26,900, the total deficit being over a quarter of a million; and they are not likely, as matters now stand, to overtake these sums for many years to come." And what are the reasons assigned for this failure? "Poverty and debt, concurrently with many other causes, of which the principal are dislike of novelty, the trouble and expense of levelling their fields, the

belief (admitted by the Famine Commissioners to be justifiable) that the crops sown on black soil will not be benefited by irrigation, the sparseness of population, the defective supply of water on many works in the hot season, and the fear that irrigated land will be assessed at higher rates at the net revision of the land-revenue." Truly, a most damning catalogue of causes, but damning, not to the experienced native agriculturist, but to the crass stupidity of the Bombay Government in allowing the D. P. W. engineers ever to construct the canals, instead of itself considering whether a remission of taxation would not help the ryot out of his difficulties.

Sir Richard Temple has been posing recently as the advocate of Lord Ripon's local government schemes, but when he was Governor of Bombay he did his utmost, in spite of the protests of district officers, to imperialize the local cess funds of the Bombay talukas, expressly levied in 1869 for local purposes, such as village roads, tree-planting, rest-houses, wells, and the like. He cancelled all the local orders requiring local funds to be spent in the districts; he sanctioned expenditure on imperial roads, and the like; and, by a system of a five years'

budget, gave over the funds to the tender mercies of the D. P. W. engineers. The old local works required no professional or engineering skill; they interested the people, who willingly gave their money for them, and they formed a desirable outlet for local activity. Instead of the local budget being carefully drawn up so as to make revenue and expenditure balance,\* large loans were raised for various works, and Sir Richard Temple gained the warm approval of Lord Lytton's Government during the famine year for his economical administration. The fact is that he looted the district municipal committees of their monies. And what was the consequence? The committees, finding that they had no funds to carry out necessary local improvements, such as wells and tanks, had to levy another cess on themselves, and it was this very recourse to a public subscriptions system † that the local cess

\* See "Memo on Local Government in Bombay," by Javerilál Umiashankar Yájnik, Bombay.

† I notice, in the last issue of the "Moral and Material Progress of India" (p. 55), that during the year 1879-80, when the local governments were squeezed by Lord Lytton's Government of £670,000, partly to pay for the repeal of the cotton duties, "in many instances the money allotted out of the road cess by the committees for village works (in Bengal) was supplemented by funds raised among the villagers." That is to say, the State

of 1869 professed to abolish. It is in this insidious way that local taxation has been increased in different parts of India. Local funds, on the plea of giving legislative sanction, have been made first *provincial*; then, as in Lord Lytton's time, under pressure of war, famine, or loss by exchange, they are made by financial readjustments *imperial*, or, if they are still called provincial, they are handed over to the D. P. W., and are squandered on imperial works.

And what does the Bombay Government now propose to do? It wishes to spend, during the next five years, four crores of rupees (£4,000,000) in the construction of more canal works, and to impose a light cess (cesses are always light to the mind of some officials) to pay for the interest charges and working expenses. And further taxation is proposed, irrespective of the fact that the Deccan ryot is notoriously suffering from a heavily assessed land tax and an enhanced salt tax. Surely this is the most rampant kind of red-tapism, and it is no wonder that Lord Ripon's scheme for self-government has met with little favour at Bombay.

having imposed a road cess, and having appropriated some of its proceeds to meet deficit caused by repeal of cotton duties, *the villagers had again to contribute towards repairing the roads!*

An impartial examination of the financial results of the irrigation works undertaken by the Indian Government will, I think, lead to the following conclusions. The perennial canals drawn from rivers high up their sources have, with the exception of the Baree Doab, West Jumna, and Ganges canals, proved a costly failure; of these three fairly successful canals the two last-named are somewhat doubtful blessings, and the only as yet absolutely successful venture is the Baree Doab canal. On the other hand, the deltaic works which have been constructed on native lines have conferred undoubted benefits on large districts, and wherever the native tank and embankment system has been maintained or extended by the energy of individual officers, the best results have ensued. Lastly, it cannot be too strongly asserted that the institution of a Public Works Department, with its enormous staff and costly machinery, has been a most fatal mistake. The old system, under which a certain number of engineers were attached to each province only as necessity required, was infinitely preferable to the present system, by which each district has a regular staff of Public Works, as well as of district officers. The conse-

quences of the change may be seen in the lavish outlay on unnecessary and useless State canals throughout the length and breadth of India, and the omission to spend petty sums on necessary and useful village works. The Public Works Department has had to justify its existence by designing schemes utterly unsuited to the country, while by its absorption of local funds it has distinctly prevented the maintenance and extension of irrigation works which have been proved to be beneficial. Engineers have gone about the different provinces, not studying the nature of the soil, the climatic conditions, and the character and means of the cultivators, but with their heads brimful of scientific theories, and their hearts burning with zeal to supply water at any cost. Professional ambition and philanthropic ardour have spurred them on, but the drag-chain of common sense has been conspicuously absent. Hence a double pressure has been put upon the Government of India. The enthusiasm of its own officers has been backed up by the self-interest of Lancashire manufacturers. The former have had visions of canal-watered crops flooding every market, while the latter have dreamed dreams of ryots rolling in



riches and consuming cargoes of cotton. And finally, the British nation has been taught by Sir John Strachey and Mr. Hunter to thank heaven that it has not behaved to India like native rulers, extortionate, unjust, extravagant spendthrifts that they were, nor even like that "publican," the East India Company, but has, like a true friend, always spent the country's revenues with entire regard to its best interests.

PART IV.  
AN ALTERNATIVE POLICY.

“Above all things good policy is to be used that the treasury and monies in a State be not gathered into few hands; for otherwise a State may have a great stock and yet starve. And money is like Muck, not good except it be spread.”—BACON.

IN the face of the facts which have been adduced in the foregoing pages, it is difficult to understand how the Famine Commissioners are able to justify their recommendation to the Indian Government to continue its Public Works policy. A capital sum of £180,000,000 has been spent during the last thirty years on railways and canals, and the interest charges, however concealed, still constitute a heavy burden on the revenues of the State. If the country were showing undeniable signs of assured prosperity, if the public revenues were steadily increasing, apart from taxation, and if the Public Works were paying their way, then it might be fairly argued that the material development of the country would be further forwarded by the expenditure of many more millions sterling on railways and canals. But if the indebtedness of the agricultural classes is on the increase, if the public revenues are collapsing from loss by exchange and

a diminishing opium trade, if public works entail local cesses and famine insurance funds to pay their incidental charges, it would certainly appear to be the height of folly to go on adding to the public debt. In 1879, a Committee of the House of Commons recommended that the Indian Government should not borrow more than £2,500,000 in any one year for outlay on railways and irrigation. This recommendation was adopted by the Secretary of State for India, and the restriction was for a short time maintained; but lately, under different pleas, the above sum has been largely exceeded. Thus for the year 1882-83 a sum of £1,763,500 appears, under the head of Productive Public Works, on account of the purchase of the Madras Irrigation Company's undertaking; and £713,200 on account of capital expenditure on the East Indian Railway, in addition to the ordinary loan of £2,500,000 for Productive Public Works. At the same time, the old guarantee system of building railways is being revived, and the Indian Government has to pay the required interest charges out of its ordinary revenues. Thus there seems every reason to suppose that there will be an increasing annual outlay. Indeed, the very necessities of the Indian Government force

it to have recourse to the help of English capitalists. It is itself now obliged to raise its loans in the Calcutta market, and has, therefore, no sums at its disposal in London to pay off its home debts, and so diminish the drain of loss by exchange. Whereas, if guaranteed companies are formed in England, their capital can be placed at the disposal of the India office, and so lessen the Secretary of State's Bills. The Indian Government is therefore strongly tempted to meet its financial difficulties by a system of indirect borrowing in the London market, and to overlook the question whether India can bear the ever-increasing burden of debt. But this method of warding off the evil day cannot be pursued for ever, and war or famine, or a falling off in the opium receipts may before long make it absolutely necessary to reduce expenditure.

But, even as matters now stand, no further expenditure should be made on public works, except from surplus revenue, and the Public Works Department ought to be thoroughly overhauled.\* There can be little doubt that the establishment might be largely cut down. Lord Lytton did good work in this direction, but the axe has yet to be laid at the

\* See Appendix B.

root of the tree, Cooper's Hill College, which has been well stated by a distinguished Anglo-Indian engineer, to be a "disgraceful imposition on India." The district engineer staff is still unnecessarily numerous, and is therefore always on the look-out for big jobs. Local committees, under the supervision of district officers, could undertake a large proportion of the work now performed by highly-paid engineers; they ought of course to have a share of the Public Works cesses placed at their disposal. One engineer, if he had merely to undertake the higher kind of superintendence, would be sufficient for three or four "districts," and he ought, for all ordinary public works, to be strictly controlled by the district magistrates. By this means all extravagant outlay would be checked. Having reduced the present expensive Public Works establishment, the next question is to encourage in every possible way the self-reliance and enterprise of all the agricultural classes. Hitherto the whole tendency of our policy has been to do everything *for* the people, and nothing *through* the people; to impose local cesses, and then spend them with little regard to the wishes or wants of the people themselves, and much regard to the wishes and wants of

the engineers. The result is, that the security which we have professed to give with the one hand by our thirty-year settlements, we have taken away with the other by a variety of exactions. At the present moment the Government, as we have seen, holds the people in the hollow of its hand ; but if it does not wish to find itself more and more assuming the position of a taskmaster, with a gigantic population of slaves living on a mere subsistence-wage, it must cultivate the growth of an independent and enterprising spirit in its peasantry. Agricultural improvements in the shape of wells—which can be made in almost all localities, and which are preferable as a source of water-supply to canals—or works for reclaiming and draining lands, ought to be encouraged by the land-settlement rules. The Famine Commission calls attention to the alleged disinclination of landowners to spend money, whether their own or borrowed, on the improvement of the land, because they doubt whether “at the expiration of a term of settlement they will be allowed to enjoy the whole of such an improvement, or whether it will form the occasion for the enhancement of their assessment. In the Punjab, it is a rule of the revenue system that constructors of



new wells should be protected for twenty years from enhancement, on account of the irrigation thus provided; and that repairers of old wells and diggers of watercourses should be similarly protected for ten years. In the North-West Provinces and Oudh and the Central Provinces, no definite rule appears to have been laid down. In Behar and Madras rules have been issued but have not the force of law; in Bombay alone has an Act been passed." Lastly, in Bengal, though the landlord is secured by the Permanent Settlement, the cultivator, who might, if protected, undertake improvements, is more or less at the mercy of the zamindar, land-jobber, and indigo-planter. Indeed, where the zamindari system prevails, the tenant, except in the North-West Provinces, has no right, if ejected for non-payment of rent, to any compensation for unexhausted improvements. The Famine Commission proposes a rule should be laid down that the assessment of land irrigated from a permanent well should not be liable to enhancement on account of the well at any revision of the settlement, provided the well is kept in efficient repair. There is reason to believe that such a rule, if adhered to, would do more to protect India against drought than all the

costly canals that have been built in the last twenty years. But it must be adhered to, and not practically stultified by the imposition of new rates on land, or continual changes in license taxes. The uncertainty which has resulted from the financial vagaries of the last fifteen years is utterly destructive of any spirit of confidence which would lead to the outlay of capital on agricultural improvements. If the Indian Government cannot inspire the sense of security under the present system of thirty-year settlements, it had better give a Permanent Settlement to the whole of India, *and give it not, as in Bengal, to the landlords only, but to the cultivators as well.* Anglo-Indians often speak of India's peasant proprietors, but they are a mere fiction of their imaginations. In no part of India have the actual cultivators that security which is implied in the idea of peasant proprietorship, though in some parts they may have something approaching to it. Mr. George's scheme for the nationalization of the land is there to a great extent realized, but as the Government is not itself national, and spends a large portion of its revenues outside the country, and must pay its English debts with unvarying punctuality, the interests of the Indian rent-payers

are often sacrificed to those of the English rent-receivers.

The Indian Government, in the face of the financial uncertainties caused by loss by exchange, naturally wishes to retain the power of applying the thumb-screw. But surely a more statesman-like method of action would be to cut down the system of borrowing for public works, and consider the best means of encouraging native enterprise. It is this kind of private enterprise, and not that of English capitalists, except in non-agricultural districts, on which rest the real hopes of India's progress and prosperity. It is very difficult for any bureaucracy, and especially one conducted by British energy, to practise the lesson of self-abnegation and humility, especially when its presence in India seems to force it to play the part of an omniscient and ubiquitous Providence. But it is the very benevolence of its governmental method that will compel it to interfere less than it has hitherto done. It has, to a large extent, removed the old physical checks on population—with the exception of famine, which it aims at averting—and it is essential to the expensive principles of Western administration that prudential

checks should take the place of physical ones, or, at least, that all unproductive outlay, such as that on weddings, should be discouraged. In freely developed countries, the very struggle with physical checks produces habits of thrift and prudence. But in India it is a foreign government that has abolished the physical checks, and the people have not thereby gained any higher qualities which may fit them for the new state of things. We stand, therefore, face to face with the Malthusian problem in its most exaggerated form. The natural increase of Indian population is reckoned as somewhat in excess of one per cent. *per annum*, or of two millions a year, while the area under cultivated crops is already equal to one acre per head of the population, and, as we have seen, the pressure of commercial competition tends to force an ever-increasing number on the land. Any action on the part of the Indian Government which merely aims at providing an increased means of subsistence, and does not call into existence any self-acting checks on population, can only end in increasing the difficulties of the situation. The more dependent and spiritless the Indian peasantry become, the more rapidly and recklessly will they

increase up to the margin of subsistence, and where famine now slays its thousands, it will in the future slay its tens of thousands. The classes which are now well-to-do will get gradually more and more impoverished under the pressure of taxation, imposed in the vain hope of keeping alive the starving mass of agricultural labourers, till at last India will sink into the condition of a gigantic pauper-warren. If this dismal consummation of all our benevolent activity is to be avoided, the Indian Government must reverse its present principles of action. It must cease to regard its own energy as a substitute for the energy of the people. It must direct all its efforts towards encouraging the self-help and self-restraint of the better class of peasantry, by making the most potent and palpable appeals to the most ordinary principles of self-interest.

It is generally asserted that, unless the natives of India change their marriage customs, nothing can be directly done by the Government to encourage prudence. But it is forgotten that these marriage customs, though sanctioned by religion, have taken their rise in social reasons, and if the latter conditions are changed, the re-

ligious sanction may also be modified.\* In his very interesting volume of essays, entitled, "Asiatic Studies," Sir Alfred Lyall, the present Lieutenant-Governor of the North-West Provinces, has pointed out the very elastic nature of primitive religion. Under the Hindu system, novel social practices are continually being introduced, on the plea that "it is the god's good pleasure to ordain and sanction these practices; but it will almost always be found that they are really founded upon some selfish material interests, and are not, as they are usually supposed to be, merely whimsical superstitions as to what will please the gods, or as to what is right and proper. Perhaps the best example of a selfish device, obtaining vogue under the cloak of a necessary rite, is afforded by the famous practice of a widow becoming *sati*, or burning herself alive with her dead husband, which is undoubtedly, as Sir Henry Maine has pointed

\* Although the proportion of married to unmarried persons is much higher in India than in England, yet English marriages are far more prolific than Indian. Thus, according to the last census returns of the North-Western Provinces and Oudh, the average number of children for every 100 wives between 20 and 40 is 30.22, and between 15 and 55, 20.11; while in England it is 35.87 and 22.35 respectively.

out, connected with the desire of the husband's family to get rid of her right, if she is childless, to a tenancy for life upon her husband's land."

Many other instances, especially those of medical treatment, are mentioned as receiving a theological interpretation, although they are based on the simplest physical processes. In the same way, "many other practices, ascertained empirically to be fit and expedient, have become in course of time so overgrown and concealed by the religious observance in which they were originally wrapped up, that it is now very difficult to extract the original kernel of utility, and one only hits upon it by accident, when, in trying to abolish what looks like a ridiculous and useless superstition, the real object and reason are disinterred, and sometimes prove worth knowing. Thus the rule of burying Hindus, who die by small-pox or cholera, is ordinarily expounded by priests to be imperative, because the outward signs and symptoms of those diseases mark the actual presence of divinity; the small-pox is not the god's handiwork, but the god itself manifest. But there is also some ground for concluding that the process of burying has been found more wholesome against contagion than that of the

hurried and ill-managed cremation which prevails during a fatal epidemic." Similarly, Sir Henry Maine has recently pointed out that the religious necessity, under the Hindu system, of having a son to perform the funeral rites, is intimately connected with the old social necessity of keeping up the village community. When each village, with the portion of land which it had conquered or cleared for itself, formed a little state, and the waste of human life by war, famine, and disease was very great, the instinct of self-preservation brought all the pressure of social customs and religious sanctions to bear on the duty of keeping up the population. The sentiment of the Jewish Psalmist is especially appropriate to the state of war: "Lo, children and the fruit of the womb are an heritage and gift that cometh of the Lord. Like as the arrows in the hand of the giant, even so are the young children. Happy is the man that hath his quiver full of them: they shall not be ashamed when they speak with their enemies in the gate." But now that the state of peace has in India succeeded to the state of war, and the density, not the paucity, of the population constitutes the true difficulty, it is the duty of the Government to encourage a point



of view more suited to the present condition of things. This can only be done by securing to the agricultural classes the fruits of their labour and abstinence. The construction of wells and tanks, and the planting of trees, has been from time immemorial regarded as a public benefaction, but the Indian Government directly discourages this excellent practice, by applying local funds to the construction of railways and canals which in many cases are of very doubtful utility. It thereby not only takes away any motive for individual energy or charity, but it destroys that one form of collective activity which is indigenous to India, namely, that of protecting the soil against the common enemy, drought. Wherever one goes throughout the whole length and breadth of India, whether to Rajputana, with its semi-tribal, semi-feudal organization; or to the Punjab, with its joint village communities; or to Madras and Bombay, with their looser village organization; or to the almost barbarous tribes of the Central Provinces;—the same system is to be found working, where it has not been thrown out of order by the interference of the Public Works Department, namely, the annual enrolment of the community for the repair of the

old irrigation works, and, if necessary, for the construction of new ones. In some parts there is a religious ceremony called the "wedding of the tanks," and large sums of money are spent in feeding and feeing the Brahmins, and though there may be a good deal of money expended unproductively on this religious jollification, yet it is better laid out, in the long run, on the fruitful marriage of a tank than on the barren follies of a canal. To enlist the religious sentiments of the people on the side of social utilities ought to be the great aim of the British *régime*, for the collective superstitions of the masses are likely to prove of more efficacy than the coercive philanthropy of the Public Works Department. Mr. Caird was evidently much impressed by the absurdity of instituting an expensive\* engineering establish-

\* I will take one instance, given in the *Indian Gazetteer*. In Mysore, during the period 1831-56, before the institution of the Public Works Department, the expenditure was as follows:—£325,000 on irrigation works, £287,500 on roads, and £60,000 on public buildings. Since its institution during 1856-76, £528,017, £967,491, and £291,995 were spent on these works respectively; and the tank system got out of repair! And now railways are to supersede some of the roads. Mr. R. Elliot, the well-known Mysore planter, in a book published some time ago, distinctly prophesied a famine, if the resources of the country were drained for ex-

ment to do for the natives what they could easily do for themselves. "The whole of the arable land of Egypt," he writes, "is dependent on the waters of the Nile for moisture, as there is no rain. The work of keeping the irrigation canals and their banks in repair far exceeds in proportion anything that is done in India by the Public Works Department; but it is done by the people themselves, on a system not unlike ours in the fens and flat districts, *ratione tenuræ*. Each year a calculation is made of the labour required, and a fourth or a third, as may be necessary, is levied from the labour power of each village. The individuals change from time to time with one another, but one-fourth at least of the adult male population is thus taken for the public works for six months of the year on an average, who receive no wages, and find their own food. This is a tax on the land equal to one-eighth of its agricultural labour, which valued in money would be equivalent to one-fifth of the Government land revenues, and is regarded as an insurance premium for the indispensable protection thus afforded to the agricultural land of the

travagant public works. We have seen above how the famine was caused. See Appendix B.

country. And I think it is very probable that in earlier times in India the old irrigation was maintained by the people themselves on a somewhat similar system, which might, with great public advantage and economy, be to a large extent reverted to." In our short-sighted benevolence, we abolished in most parts the *corvée*, on the ground that forced labour was not to be countenanced by a nation which had spent millions in putting down the slave trade, and boasted itself to be the apostle of freedom all over the world. Moreover, the very word *corvée* suggested that decayed remnant of feudalism which helped to bring about the French Revolution, instead of a national army system such as might be seen in Prussia.

What the Government has now to do is to retrace its steps, to breathe fresh life into the old village system by giving over to local bodies the control of local affairs. By this means the co-operating aid of the people will be enlisted on the side of the Government, and the fatal tendency of the peasantry to rely on the efforts of others rather than their own will be materially checked. To prevent oppression, and to apply the suitable stimulus, the supervision of the district officer will no doubt in

most cases be found necessary, but, except in cases where the requisite engineering knowledge and skill are not forthcoming, the English public works officer ought to be conspicuously absent.

Having done its best in years of plenty to accustom the peasantry to collective action and individual enterprise, the Indian Government ought, in seasons of famine, to aim at encouraging a village relief system by which aimless wandering might be prevented, and overcrowded Government relief works might be discontinued. The Famine Commissioners write : "Native society is justly famous for its charity. It is owing to the profound sense which is felt by all classes of the religious duty of succouring, according to their means, the indigent and helpless who have claims on them as members of the family, the caste, or the town and village, that in ordinary times no State measures of relief are needed." But in time of famine such charity cannot be practised, if the Government, by the rigorous exaction of the land tax, not only deprives the wealthier classes of their power to help the poorer, but actually cripples them for the future by forcing them to borrow of the money-lenders. The Famine Commissioners dis-

tinctly advise the Government "to relax the demand for land revenue at a time of widespread loss of harvest, suspending it freely in proportion to the degree of that loss, on condition that a proportionate relief is given to tenants and others who have subordinate rights in the land." This proposal has been urged for some time past by more than one district officer,\* and the Indian Government professes to have always acted on this principle, but any one who reads the official reports of the last famine is well aware that very great suffering was inflicted by the non-observance of this principle. In fact, one of the most notable features of the revenue system, as now administered, consists in its ever-increasing strictness. I will take, as an illustration, the famines of 1837-38 and 1877-78, both of which affected the North-West Provinces. In the first case, we are told "remissions and suspensions of revenue were freely

\* If any one wishes for full information on the working of the land revenue system, he cannot do better than read "Our Land Revenue Policy in Northern India," by C. J. Connell, Bengal Civil Service, 1876: Thacker, Spink & Co. This book was written at the time of the last thirty years' settlement, the writer being himself engaged in the settlement work. Some relief has recently been given to the heavily taxed landowners of the North-Western Provinces by the remission of the Patwari cess, £316,000.

granted, the remissions amounting to nearly half the land revenue demand in the affected tract;" but in the second, though a quarter of the land revenue was suspended at the end of 1877, arrears were collected so rapidly in the spring of 1878, that the landowning classes were forced to sell and mortgage their property.\* The famine was not really

\* For further facts on this point I must refer to "Discontent and Danger in India," pp. 34-36 and 134-138. The Indian Government has lately issued a number of resolutions to the revenue authorities of Northern and Central India, giving them greater discretion. It is to be hoped that financial necessities will not stultify these measures. Loss by exchange is reckoned at £3,115,600 for the year 1882-83, and at £3,548,000 for the year 1883-84. About one-third of this is due to productive public works remittances, and the rest to remittances for the ordinary public debt and administration. It is generally admitted that each addition to the capital borrowed in England tends, in the long run, to increase the loss by exchange, though momentary relief may be obtained. Thus the large loans raised for railways have materially affected the whole of the home remittances, so that without them the loss by exchange would be lessened by a much larger sum than that which is directly due to these loans. "The direct cause of this loss was shown by Mr. Goschen's Silver Committee of 1876, to be due to the gradual increase in the home charges, but more to the absence of a set-off to the Secretary of State's drafts on India, which set-off had, up to about 1872, been supplied during a series of years by capital of the Guaranteed Railway Companies paid into the India Office Treasury. The influence of Council Bills, in keeping down the market price of silver, is far more weighty and persistent than is the effect of the recently increased production of silver." Mr. Martin Wood, from

over till after the autumn harvest of 1878, so that the indulgence shown by the Government was very small indeed. As we have seen, 1,250,000 died during the famine; and next year another 1,000,000 died of fever, the fatal nature of which was largely due to insufficient food. Nothing is known with exactness as to the mortality of the year 1837, but it was calculated by Colonel Baird Smith, long after, at about 800,000. Other instances might be adduced to show that the Indian Government does not act up to its professions on this point. The fact is, that the home remittances which must be punctually paid have reached such a heavy sum, especially since they have led to the item of "loss by exchange," that the Government is compelled to play the part of a remorseless Shylock, and exact its full pound of flesh, even though it drains the very life-blood of India's social system.

It is a notorious fact, that in the famine of 1877-78 the Lieutenant-Governor of the North-  
whose pamphlet, "Indian Public Works Finance," the above extracts are made, advocates a return to raising loans in England for productive public works, but the whole of his argument is based on the assumption that the works already made are remunerative. In the Financial Statement of March, 1881, Major Baring said, "We can never feel any certainty of the sum to which the item 'Loss by exchange' may not amount."



West Provinces, in spite of all protests, received peremptory orders from Simla to collect the land revenue. The financial exigencies of the moment were declared to be paramount, and the Viceroy of the time being—as is always likely to be the case with such ephemeral personages—had to act with an eye to immediate necessities. But, as the Famine Commissioners clearly see, the only hopeful method of solving the famine problem is through the village organization. Charitable landowners, if leniently dealt with by the revenue officials, will no doubt be able to give a large amount of help, but their efforts may require supplementing by the State. “In most parts of India,” we are told, “some village organization exists, which offers a ready and natural, though still imperfect, machinery for coping with famine, and it is of special importance that whatever is possible should be done towards improving and strengthening this machinery where it is present, so that it may become more thoroughly efficient for the purposes of village relief. For the future progress of the country, the encouragement of the principle of local self-government, by which business of all kinds should be more and more left to local direction, is

of much moment, and nowhere more so than in dealing with the relief of local distress; and however great be the difficulties in the way of its early practical realization, it will be well never to lose the opportunity of taking any steps that may lead towards it." Mr. Caird considered the decadence of the village system to be at the root of many of the evils from which India is suffering:—"By our centralizing system we have drifted away from the patriarchal method of rule common in the East, where the populations are agricultural and dense, under which the management of the people is left to their natural leaders, the headmen of the villages, hereditary or elected by the people, who are recognized by the community, and who administer justice and preserve order, and are responsible for the public revenue. We have superseded this by discrediting the headmen, and, in Madras and Bombay, by an attempt to bring millions of small holders into direct contact with the Government through native officials of a low type (for the higher officers, so few in number, rarely have time to see them), and with a theory that our European officers, so few in number, will be able personally to supervise the arrangement,

which is physically impossible. The headmen, no longer recognized or treated as leaders, and seldom communicated with, except through the lower class of native officials (who are said to be apt to take advantage of their position to extort bribes), become distrustful of us, and are distrusted by us. I rarely met a civilian in India who did not speak of the headmen with distrust. The British merchants who carry on their great business in India make no similar complaints of the native merchants, whom they find honest and upright.\* Our

\* This is frankly admitted by British officers who have lived in sympathetic contact with the people. Thus Mr. W. C. Benett, now Head of the Agricultural Department of the North-Western Provinces and Oudh, writes, in his introduction to the *Gazetteer* of Oudh, a typical Hindoo province: "Trade transactions involving enormous sums are carried through with a want of precaution which we should consider idiotic, but which is justified by the rarity of breaches of faith. In a country where writing is an art as common as it is with us, large debts are contracted every day on nothing but the verbal security of the borrowers, and if there may be occasional repudiation in our courts, the fact that that security is still considered sufficient is ample proof that the debts are honourably acknowledged among the parties themselves. In such cases limitation is never thought of, and families who have emerged from poverty will discharge debts contracted by their ancestors a century back, of which no other record exists but an entry in the money-lender's private ledger. Their whole social system postulates an exceptional integrity, and would collapse at once if any suspicion of dishonesty attached itself to the decisions of the caste *panchayats*. This point is worth insisting on, as on it depends the

officers do not know the natives as they used to do when our Government was less centralized, and they are every year becoming more strange to the people by the increase of modern judicial duties, and the frequent changes from locality to locality." To this charge the Indian Government replies, "It is hardly correct to say that the British Government has effaced the village or communal system. That system had disappeared from Bengal, if it ever existed there, long before the British conquest. It flourishes still in Northern India, and some of its more important characteristics are still in full vigour among the peasant proprietors (ryots) of Western and Southern India. But, after all, the village is a primitive social organism," and, as is frankly confessed in this despatch, the reign of peace and law, and the commercial development of the country tend to break it up. Anyhow, whether the blame lies with the violence of the Mussulman tax-gatherer and the Mahratta horseman, or with the benevolence of the British administrator and progressist, it is admitted that over whole of their fortune as a self-governing nation, and though much has occurred to impair their character in this respect, it would be unsafe to deny them, at any rate, the capacity for the first of political virtues."

a great part of India the one naturally evolved form of organization has been gradually losing its vitality. What has taken its place? The symbol of Western civilization, the home of commercial activity, the battle-field of capital and labour—the municipality. “Before our own eyes,” writes Mr. Hunter, in his enthusiastic eulogy on the industrial era, “we see the self-government, which the primitive village communities had ceased to give, developing into a higher form of self-government under municipal institutions. At this moment there are nearly one thousand municipalities in India, with a municipal population exceeding fourteen millions, and raising among themselves for local purposes a revenue close on two millions sterling. There are also in some of the provinces district boards and rural unions, which do for the country what the municipalities do for the towns. The Indian races are visibly passing from the village into the municipal stage of social organization; and the first lessons in local government are being learned by fourteen millions of native citizens.” All this must sound very fine in the ears of Manchester and Birmingham, with their bran-new municipal government; but is not

Mr. Hunter somewhat presuming on the ignorance of the British public? It may be true that we have called into life a thousand municipalities as commercial centres; but on how many of the nearly half-million village communities, the agricultural centres scattered all over India, have we passed a sentence of death? The native population is becoming more and more engaged in agriculture; is it losing the capacity for joint action? Is it invisibly passing into a stage below that of the village, that of competitive animalism? Calcutta, Bombay, Cawnpore, and Kurrachee may fill an Englishman's heart with pride; but are the toiling millions up country the better, physically and morally, for the existence of great trading marts? "After a minute comparison," writes Mr. Hunter, "of rural India at present with the facts disclosed in the manuscript records, I am compelled to the conclusion that throughout large tracts the struggle for life is harder than it was when the country passed into our hands." And as a result of this intensified struggle for existence, the old *morale* of the villagers is sadly deteriorating. The pressure of population on the soil necessarily decreases the surplus left over for rent and revenue purposes, and

the necessity for protecting the tenant against the rack-rents of the landlord, and the landlord against the defalcations of the tenant, and both against the rapacity of the usurer, entails continually fresh legislation, with its inevitable attendants of litigation and lying. British Courts and Codes, with all their costly apparatus, which can alone keep the peace between the now bitterly contending parties, have gradually superseded the cheap justice of the old arbitration courts of the village commune.\*

The combined action of all these powerful forces cannot but disintegrate the village organism into a mere concourse of social atoms. This new change is euphemistically called the development of

\* "In India," writes Sir J. Caird, in a letter to the *Times*, Nov. 27, 1872, "much of the business of the local courts is to aid in collecting the debts of the money-lenders. The cost of this is repaid by fees exacted by the State, amounting to about twenty per cent. of the value in dispute paid by the losing party, who is, as a rule, the impoverished cultivator. These fees, bringing in a public revenue of £2,000,000, add ten per cent. to the burden of the land revenue; and if we assume that as much as one-fourth in number of the landowners, and those the poorest, are always before the courts, the fees operate as an addition of forty per cent. to the land revenue, paid by those unfortunate litigants, as they fall chiefly on them. This is a blot which should as early as possible be met by a large reduction in the scale of fees." • For further evidence on this head, I must refer to "Discontent and Danger in India," pages 53-63 and 127-128

the sense of individual rights, and is regarded as an advance in civilization, and will, we are assured, lead to the supersession of the old village system by local and district boards, and municipalities of the Western type. No doubt such organizations, if they do not lead to increased taxation, may help to revive local life in agricultural districts; but, after all, for the toiling masses the village must remain the only possible centre of co-operative life. In Western countries, after many centuries of change, the village has been superseded by wider societies as the inspirers of public spirit, and the growth of individualism has been balanced by the sense of duty to the community; but in India the village still includes all that we mean by the terms church, community, and country. In its life the higher phases of Hindoo existence have been developed; beside its watering-places and beneath the shade of its trees, the prophets and poets, the artists and architects, the weavers and the workmen of all kinds, have expressed in their words and work the joys and sorrows, the hopes and fears, of their souls. If the life of the village\* is destroyed,

\* For description of Indian village system, as given by Mr. B. H. Baden-Powell, Bengal Civil Service, see Appendix C.



Indian society is in a state of spiritual dissolution, and is only held together by the external force of an omnipotent Government, which protects the individual rights it has itself bestowed, but paralyzes the sense of social obligations which have been handed down from the past, and crushes the creative powers of the present. Surely the plaintive appeals of invisible spirits must ring sometimes in the ears of the Indian Government and of the English Parliament, that, like Faust in his passion of speculative radicalism, have cursed the practical conservatism of immemorial custom :—

“ Weh ! weh !  
Du hast sie zerstört,  
Die schöne Welt,  
Mit mächtiger Faust ;  
Sie stürzt, sie zerfällt !  
Ein Halb-gott hat sie zerschlagen !  
Wir tragen  
Die Trümmern ins Nichts hinüber  
Und Klagen  
Ueber die Verlorne Schöne.  
Mächtiger  
Der Erden-söhne,  
Prächtiger  
Baue sie wieder  
In deinem Busen baue sie auf ! ”

## APPENDICES.



## APPENDIX A.

THE following extracts are taken from official and semi-official publications. F. C. = Famine Commission's various Blue-books; C. D. = a memorandum by Mr. Caird, called "Condition of India;" and R. C. D. = the reply of the Indian Government to the same.

"The available good land in India is nearly all occupied. There are extensive areas of good waste land covered with jungle in various parts of the country, which might be reclaimed and rendered suitable for cultivation; but for that object capital must be employed, and the people have little to spare. The produce of the country, on an average of years, is barely sufficient to maintain the present population and make a saving for occasional famine. . . . Scarcity deepening into famine is thus becoming of more frequent occurrence. . . . There are more people every year to feed from land which, in many parts of India, is undergoing gradual deterioration."—C. D.

### INDEBTEDNESS OF THE LANDED CLASSES.

"No subject has been more strongly and frequently pressed on our attention than the evil results which

spring from the degree to which the landowners are sunk in debt, the asserted rapid increase of their indebtedness, and the difficulty they find in extricating themselves from such burdens. In some parts of India, notably in the four districts of the Bombay Deccan and in the Jhansi district, their indebtedness has become so grievous, that the Government has recently been led to take special steps for their rescue, and in other parts it has at different times intervened to protect special classes whose ruin, otherwise unavoidable, it was thought necessary, on political grounds, to ward off.

\* \* \* \* \*

"We have found no reason to believe that the agricultural population of India has, at any known period of their history, been generally free from debt, although individuals or classes may have fallen into deeper embarrassments under the British rule than was common under the native dynasties which preceded it.

\* \* \* \* \*

"We learn, from evidence collected from all parts of India, that about one-third of the landholding class are deeply and inextricably in debt, and that at least an equal proportion are in debt, though not beyond the power of recovering themselves."

\* \* \* \* \*

"The origin of debt among the landed classes is traceable to various causes, among which the most prominent are the failure of crops from drought,\*

That is to say, if the land tax is rigorously collected, as, for instance, in Jhansi, in the famine of 1868, and in the North-Western

expenditure on marriage or other ceremonies, general thriftlessness, an improvident use of sudden inflations of credit, the exactions of an oppressive body of middlemen, and administrative errors such as unsuitable revenue settlements; and debt once incurred very rapidly grows with exorbitant rates of interest.”—F. C.

#### AGRICULTURE.

“With regard to the ordinary food staples of the country, the cereals, pulses, and milllets, it cannot be said that any improvement has been effected within the last twenty or thirty years in the method of their cultivation or in their outturn of produce. On the contrary, as time has gone on, as the pressure of population on the soil has increased, as peace has enabled more labour to be devoted to agriculture, and as canals have in parts provided a more liberal and constant supply of water, it can hardly be doubted that the temptation has been felt to raise more crops off the soil, and to extend cultivation to poorer soils which formerly were un-

Province in the famine of 1877-78. The statements of the registration officers showed that some thirty thousand registered sales, of the value of thirty-seven lakhs, were the direct result of the failure of the crop in the North-Western Province for the latter year. Of the effects of this famine Mr. (now Sir) Auckland Colvin, late collector of Bijnour, wrote, that “money had to be borrowed on a large scale at a high rate of interest, and much jewellery was sold or pawned. A calamity such as that of 1877-78, partial though it is, guts a district; embarrassments have been renewed or created which will never be cleared off.”—See “Discontent and Danger in India,” pp. 32-36, and 134-137.

remunerative, and that thus to some extent the earlier cultivated and better soils have been exhausted, and the addition of the poorer ones has lowered the general average of production. It is easier to point out these faults than to devise the remedy. The main defects of the Indian system of agriculture consist in ploughing too superficially, in not giving enough manure, and in the reckless use of water when the cultivator can get it with little labour. Of these faults he is generally conscious, but they are largely due to his poverty, and it is of no avail to ask him to correct them, as long as he is unable to buy and to feed more and stronger bullocks, to save his manure, and to resist the temptation of getting as much as possible out of the land to-day without regard for the morrow."—F. C.

#### CLASSES THAT SUFFER IN FAMINE.

"A main cause of the disastrous consequences of Indian famines, and one of the greatest difficulties in the way of providing relief in an effectual shape, is to be found in the fact that the great mass of the population directly depends on agriculture, and that there is no other industry from which any considerable part of the community derives its support. The failure of the usual rain thus deprives the labouring class, as a whole, not only of the ordinary supplies of food obtainable at prices within their reach, but also of the sole employment by which they can earn the means of procuring it. The complete remedy for this condition of things will be found only in the development of industries

other than agriculture" (why have we ruthlessly destroyed those which existed?) "and independent of the fluctuations of the seasons. With a population so dense as that of India, these considerations are of the greatest weight, and they are rendered still more serious by the fact that the numbers who have no other employment than agriculture, are in large parts of the country greatly in excess of what is really required for the thorough cultivation of the land. So far as this is the case, the result must be that the part of the population which is in excess of the requirements of agriculture eats up the profits that would otherwise spring from the industry of the community. It is not surprising that in a country thus situated material progress is slow."—F. C.

#### FOOD.

"The food of the people is essentially vegetable, and consists for the most part, as might be expected, of the food crops ordinarily raised in the country they inhabit, the coarser grains being consumed by the poorer classes of population, and the finer and dearer kinds by the richer classes. In the Punjab, the North-Western Provinces, and Oudh, in Behar and the northern part of the Central Provinces, and in Guzerat, the poor classes live on the millets grown in the rains, and on barley and gram; the richer classes eat principally wheat and rice. In Bengal proper and Orissa, and the eastern portion of Central India, rice is the principal food—the coarse, early rice being mainly taken by the poor; the finer, late rice by the rich.



In the south or Mahratta speaking part of the Central Provinces, in Berar, in the Bombay Deccan, and the northern part of Madras, the two large millets, jowar and bajra, form the principal food of the poor, the rich generally living on imported rice and wheat. In Mysore the ordinary food is the small millet, ragi. In the southern part of Madras and the western districts of Bombay rice is chiefly consumed, though there is also a good deal of millet grown and eaten. All classes mix pulses with their food, the nitrogenous matter which is found in the pulses supplying an ingredient of which little exists in the cereal grains, and which is necessary for the nutrition of persons who rarely eat meat.

"Meat is comparatively little eaten by any classes in India. Mahomedans, indeed, for the most part, make it a regular article of their diet, but in small quantities, to supplement the main vegetable elements of their food. The meat they eat is generally that of sheep and goats, less often beef or fowl. The lower classes of Hindus have no scruples in eating meat other than the flesh of horned cattle, and their abstinence is largely due to their inability to buy so expensive a luxury."—F. C.

"About 80 per cent. of the natives are permitted by their caste rules to eat this kind of food (fish), practically the only animal food available to the Indian husbandman. The price of fish has doubled, and for a time the fishing castes prospered greatly. In time, however, the enormously increased consumption began to tell. . . . In 1871, returns collected from all India disclosed an

alarming decrease in this important source of food. Almost everywhere the yield has ceased to be equal to the demand. In some parts, the fishing castes had so exhausted the waters that many of them had to give up their hereditary trade and become tillers of the soil. In others, the people were eating frogs instead of fish, cooking them in the same way, and distinguishing between the comparative delicacy of the 'solitary,' 'green,' and spangled species."—"England's Work in India," by W. W. Hunter, pp. 63, 64.

#### CATTLE.

"The Indian climates, varying as these do, appear to be specially favourable to cattle. Every one who has kept cattle here knows that, if moderately fed and given plenty of work, and kept away from contagion, they never seem to be sick or sorry, but work on hardy and healthy from youth to extreme old age. They are very prolific, too. If our poor beasts only had reasonably fair play, the whole empire would swarm with cattle, and cattle able to work the heaviest ploughs, and, in soils and situations where this was necessary or desirable, to plough as deep as you like.

"But what can be expected under existing conditions? Annually a rigid Lent, too often merging into actual starvation, followed by a sudden gorging with unwholesome food. The people are keenly alive to the dangers of such alterations, and labour hard to prevent the latter, or they would not keep a single head alive; but, despite all their care, their losses are enormous.

In bad years whole provinces are devastated. But a few years ago more than half the cattle in Oudh were lost during two successive bad seasons."—A. O. Hume.

"The pasture grounds of the villages have to a large extent been brought under the plough, and the cattle in many districts have degenerated from insufficient food. The same number of oxen can no longer put the same amount of work into the soil. . . . While, therefore, the husbandman has now to wring a subsistence out of inferior lands which he would not have touched a hundred years ago, the good lands have deteriorated for want of manure and from want of rest, and the cattle have degenerated from lack of pasture. This sad description does not apply to all India, but it represents the state of things in large and increasing areas where the population has outgrown the food-producing powers of the land."—W. W. Hunter.

"The working cattle are almost entirely stall-fed, the stalks of the rain crops and the straw of the spring crops being entirely utilized for this purpose. The stalk of the jowar, bajra, maize, and other great millets furnish an immense weight of fodder to the acre. These crops are sometimes grown for fodder only, and are cut before the seed ripens. Green fodder crops are uncommon, and if they are not more generally sown, it is probable that they are not as paying as the crops now raised at the same time. It is undeniable that in the dry parts of India cattle, if not driven away to distant highland pastures, suffer much during the three hot months of summer before new forage springs up on the first fall of rain. Our Agricultural Department in the

North-Western Provinces has for some time past given attention to this subject, and has succeeded in greatly extending the growth of lucerne grass, and other foreign fodder plants. We will shortly consider whether the further extension of green fodder on canal-irrigated land might not be promoted by reducing the water-rent on fields put down with green food fodder crops."—R. C. D.

#### FUEL AND MANURE.

The cattle dung is almost universally collected and dried for use as fuel. Even if the ashes are thrown upon the land, the straw part, so useful for retaining moisture, is lost. The gradual reclamation of jungle, owing to the pressure of population on the land, is abolishing the old fuel. "Many careful observers believe," writes Dr. Hunter, "that the clearance and cultivation of the jungles have been carried to such an excess in some parts of India as to seriously alter the climate. For forests, and the undergrowth which they foster, not only husband the rainfall, but they appear to attract it. A hill covered with forest is a reservoir of moisture; the same hill, stripped of its woods, becomes hard, arid ground, down whose bare surface the tropical rains rush off in destructive torrents, instead of sinking into the subsoil, or being stored up in the vegetation." In the *Gazetteer of India*, under the heading of Coorg, it is noticed that the coffee-planters have in that part been guilty of ruthless destruction of the forests. The railways have also helped—they consumed 154,318 tons of wood for fuel in 1881-82—and now a costly Forest Department is required.

## COAL.

As far as I can discover, coal is only used for the railways and factories ; it is too expensive for the peasantry. As a rule, coal-beds are only found in certain parts south of the Ganges and north of the Godaveri. Iron manufactures have hitherto failed, owing to the large percentage of ash in the coal. Native iron industries are said to be languishing under English competition, though it is admitted that the native method of smelting iron is better than that tried by English companies. See *Gazetteer of India, passim*.

## POPULATION, ETC.

" In the country immediately under British rule there are, on the average, 211 persons to the square mile ; if the feudatory states be included, the average is 165 to the square mile. In order of density the provinces stand thus :

Oudh	...	...	...	...	...	468
Bengal	...	...	...	...	...	397
North-Western Provinces	...	...	...	...	...	378
Madras	...	...	...	...	...	226
Mysore	...	...	...	...	...	187
Punjab	...	...	...	...	...	173
Bombay	...	...	...	...	...	131
Berar	...	...	...	...	...	129
Ajmir	...	...	...	...	...	119
Assam	...	...	...	...	...	99
Central Provinces	...	...	...	...	...	91
Coorg	...	...	...	...	...	84
British Burma	...	...	...	...	...	31

"The average, in the case of Bengal and the North-Western Provinces, is brought down by the large area of mountainous and thinly peopled hill-country. In the Punjab, the large desert tracts produce a like result.

"In Bengal there are seventeen districts in which the population is over five hundred to the square mile, thirteen in the North Western Provinces, seven in Oudh, three in the Punjab, one in Madras, and one in Bombay.

"The great preponderance of this population is rural; in Bengal, North-Western Provinces, and Oudh, ninety-three per cent. of the inhabitants live in villages, and only seven per cent. in towns containing over five thousand people.

"The thirty-seven millions of houses occupied by the people of British India are grouped into 493,444 townships or villages, giving an average of 5·14 people to a house, 75 houses, and 386 persons to a village.

"The following table is an estimate of the proportions into which the adult male population is divided as regards employment :—

	Per cent.	Estimated number of adult males.
Professional, including Government service ...	3·6	2,232,000
Domestic ... ..	6·2	3,844,000
Agricultural ... ..	56·2	34,844,000
Commercial ... ..	5·2	3,224,000
Industrial ... ..	13·1	8,122,000
Labourers ... ..	12·3	7,626,000
Independent and non-productive ... ..	3·4	2,108,000
	100·	62,000,000

“Of the 2,232,000 classed as professional, about one million are employed under public authority, and include 223,000 police and village watchmen, and 571,000 municipal, local, and village officials. About another million are employed in private professions: 629,000 are recorded as being engaged in religious or charitable duties; 139,000 in literature, science, and education; 218,000 in the fine arts.

“Thirty-four and three quarters millions, or 56·2 per cent., are returned as agricultural. As to this, it must be remembered that—

“(1) The agricultural population is not restricted to adult males, large numbers of women and children being engaged in agriculture.

“(2) Many artisans and professionals, besides their trade, own and cultivate land, and must be added to the population that lives on the soil, as must also the greater part of the labouring population.

“It is probable that ninety per cent. of the rural population, or rather more than eighty per cent. of the total population, is closely connected with the land.

“The commercial class is returned as numbering nearly three and a quarter millions of adult males. Of these nearly two and a half millions are engaged in trade, mainly as general merchants and shopkeepers, and a quarter of a million are bankers and money-lenders. The rest, in number about one million, are carriers, such as boatmen, cartmen, bearers of palanquins, or porters; and 396,000 are connected with navigation,

their numbers being largely recruited from the boatmen who ply on the rivers of Bengal.

"The industrial and artisan class numbers eight millions. Its most important divisions are the class engaged in making fabrics and articles of dress, numbering three and a quarter millions; and the workers in metals, minerals, etc., including potters, number 1,373,000. These two classes, weavers and potters, are conspicuous among the classes upon whom famine presses most heavily.

"Most important of all, however, for the purposes of famine relief administration, is the class of labourers, numbering over seven and a half millions, the great majority of whom are agricultural labourers; of these two and a half are in Bengal, two millions in Madras, one and a half millions in the North-Western Provinces. The list is concluded with a class of "non-productive" persons, amongst whom a million "beggars and paupers" may be taken as representing the number of persons dependent in ordinary times on the charity of the public. Thus the classes most liable to suffer from famine, the labourers, beggars, weavers, and potters, amount in number to about thirteen millions of adult males, or a population of nearly forty millions, including women and children, or twenty per cent. of the total population of British India."—F. C.

#### WASTE LANDS.

"On the whole, then, it may be said that there are considerable parts of India, such as the Bardwán and



Patna divisions of Bengal, the Benares division, and the lower and middle Doab in the North-Western Provinces, with parts of Rohilkhand and Oudh, and two or three of the most populous districts in the Punjab, in which the population is so dense that it presses closely on the means of subsistence; and here, unless the existing system of agriculture is improved as to yield a larger produce per acre, there is no room for an increase of the population. Excluding these tracts, there is in most villages scope for a slow and gradual extension of cultivation by the breaking up of uncultivated land, and for the more careful cultivation of what is now under tillage, and outside the village areas there is an immense extent of land which is more or less fit for cultivation. But much of it is poor land, and where it is not poor, either the climate is feverish or else the conditions are so different from those that prevail in the densely populated places from which emigration might be desired or expected to come, that settlers would be alarmed or discouraged. Probably the only tracts to which these objections do not apply are the desert waste places between the Punjab rivers and along the Indus, in which, if irrigation is ever introduced, cultivation can be carried on under much the same conditions as those which prevail in the greater part of Upper India.

“In connection with this subject may be noticed the extent and locality of unoccupied land available for European settlers. It is admitted, as the fruit of general experience, that Europeans cannot actively carry

on agricultural operations, or bring up families, in the plains of India. Suitable sites for such settlers can only be found in elevated hill tracts, where the climate is cold enough for European constitutions. Even there, in the hot season of the year, field labour could hardly be undertaken by Englishmen, and such labour is always performed by natives of India at the settlements that have been formed by Europeans. With few exceptions, these settlements are to be found only on the Himalayan ranges to the north of the Punjab, the North-Western Provinces, and Eastern Bengal, on the mountains bordering the Assam Valley and Cachar, and on the southern portion of the Western Ghats, from the Mysore territory to Travancore. In the two first-named tracts are situated the greater part of the tea-gardens of India, and some cinchona plantations, and the teas of Kangra, the Dehra Dun, Kumaon, Darjeeling, Assam, and Cachar are already widely known. In the last, the best-known parts of which are Coorg, Wynád, Ootacamund, and the Pulney Hills, coffee is largely produced, with some tea and cinchona, and the same region is now becoming more widely known on account of the discovery of gold within it.\* Much of the land, however, that is suitable for cultivation in such localities is either subject to private rights, or else has been reserved by Government for purposes of forest conservation, and it would be a mistake to suppose that there is any large area open to European settlers in which no rights exist, and which Government is able to dispose of without inter-

\* N.B.—These mines have recently ceased working.

ference with the existing local population, or without injury to other interests which it may be important to respect."\*—F. C.

#### NATIVE STATES.

"Nothing struck me more than the greater liveliness and spirit and general evidence of active industry in the capitals of native states compared with towns of equal populations under our rule. The native gentlemen are more independent, the upper class in the British States having become to some extent gradually levelled down and absorbed in the general community. The people in the cities are undoubtedly more prosperous and happy than ours. Each is a centre, where the ablest and wealthiest congregate; in which the revenue of the State and the great landowners is received; and where all classes of artificers, shopkeepers, artisans, and

\* I may here point out that European tea-planters have in a great many cases received their lands on long leases or on fee-simple, while no natives, except in Bengal, have been so favoured. "Land in Assam, for instance, is granted for tea-planting on easier terms than for rice cultivation" (*c.f.* Despatch of Indian Government, June 8, 1850). And though the planters get roads, bridges, and railways made out of public funds, they are always attacking the Government for non-encouragement. What they really want is to have the natives at their mercy, to have no labour-transport laws nor rent acts, but to have—as they had for six months in 1860, at the time of the Bengal indigo riots—the power of enforcing contracts by a criminal suit with the penalty of imprisonment. Though tea-plantations are entirely worked by European capital, coffee plantations are worked partly by natives and partly by Europeans. In fact, coffee was long ago cultivated by the natives.

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labourers find regular employment, and native art and skill are developed and rewarded. The example we have afforded of impartial justice, and the equality of all men before the law, is taking root in the native states where our influence extends, and this is combined with the presence of governments which determine and carry into execution each for itself, as it can afford, the public works deemed best for general convenience. It is this self-containedness and self-dependence that is wanting in our provinces."—C. D.

## APPENDIX B.

### DEPARTMENT OF PUBLIC WORKS.

“THE very costly Department of Public Works, as a general office connected with the Viceregal Government, should be closed, each province should carry on its works as it found most desirable and as its finances admitted. Native engineering talent should be cultivated, and full scope given to it. Of the large body of officers employed in the Public Works Department in India, nearly four-fifths are English, and the native *employés*, are generally kept in the most subordinate positions. Native engineering talent has thus not only received little encouragement, but has been kept down by the present system. The existence of it is undoubted, but the men who would have been found to direct, in former times, are gradually disappearing. They were the hereditary leading masons who still in native states keep their pre-eminence. Their merit and artistic taste have been always fully appreciated by the English engineers and contractors, and their special skill in irrigation works in a country the chief art of which for ages has been the economical use of water, is fully recognized. This class of men, working in con-

junction with the native banker, who manages the accounts, might become native contractors, either of whole or sections of works, and take the place of the more costly European. The elaborate amount of English book-keeping and correspondence required by the Public Works Department, for which they were not fit, has excluded their practical and useful assistance from being taken full advantage of, and has necessitated the introduction of an entirely new class of overseer in the native of Bengal. If, instead of a Central Department attempting to deal with all India, each province was left to its own guidance and responsibility, local wants would be listened to, local interests and sympathy would be aroused, public works would not be prematurely urged, and those most urgently needed would be first attended to. The local gentry and heads of villages would be called on to take a share in local administration, and native engineers and contractors would be consulted and employed. This would raise their position and admit the development of the talent kept dormant under our present arrangements. Not only would the State be served by a much less costly instrumentality, but there would be gained also that continuity of design which is so liable to be broken by the change of European engineers, obliged by the climate to seek health at home. The costliness of the present system prevents many useful wants from being undertaken; the money goes so short a way. A change of this kind would tend to great economy, and would bring out as coadjutors with us in the administration of India the most ingenious class of

native talent, better capable of aiding in the development of the country than even that large body of native officials now found so indispensable in the Judicial and Revenue Departments.”—C. D.

#### WELLS.

“It was pointed out by Sir Arthur Wellesley, in 1805, and continues still to be the fact, that much the largest proportion of people in India are fed on grain other than rice—somewhat less than a third on rice. The grain is chiefly sown on the higher and dry soils which depend on the monsoon rains, and which cannot be conveniently reached by river-channel irrigation. Hence the great advantage of giving to such lands, wherever practicable, the benefit of wells. If each cultivator had the power of applying water to one-third of his cultivated land, the country would be secure against drought and famine. And, though water is not found in all parts within such a depth as would admit of its profitable use, there are districts in most part of India where wells might be made with perfect success, and without that risk of sickness which so frequently accompanies canal irrigation in other localities than deltas. The collector of Cuddapah, in Madras (Mr. T. D. Gribble), thus describes the value of wells in time of famine: ‘The month was February, 1877, when the famine was at its worst. There was not a drop of water in any tank or channel, and the whole country was burnt up waste. Suddenly I came across a broad valley through which the high-road ran, which was, comparatively

speaking, a perfect garden of millet and raggi crops. The millet was the height of a man, with heavy cobs just ready for reaping. These crops were entirely raised under wells, and extended for more than five miles. When I passed out of this belt to a part of the country where there were no wells, the land was a dry, arid waste. Similar cultivation was to be seen wherever there was a well. During the season of 1876-77, there was scarcely an acre of productive cultivation (except under a few of the largest river-channels) which was not dependent upon a well. Had it not been for the comparatively few wells that we have, the famine would have been far more intense than it was.' From what I saw there, and in other parts of India, I am able most strongly to confirm the recommendation of the Committee of the House of Commons on Indian Public Works, in favour of advances being offered to the cultivators for the extension of wells and river-fed or deep tanks. But the mode of administering such advances ought to be greatly simplified."—C. D.

In spite of the rule laid down in Madras, that no additional assessment is charged in respect of wells constructed by a cultivator, the collector of Cuddapah draws attention to the fact that this rule does not apply to wells which "from their locality are supposed to derive their supplies from Government tanks and channels." Such wells are chargeable with a higher assessment, "even though there is no water in the tank. . . . Sometimes, again, a well is dug in land commanded by a Government irrigation work, and the



water taken to land which the Government work does not command, and the land thus irrigated is charged with the irrigation assessment. This again operates as a discouragement to well-construction" (extract from "Note on Wells in Cuddapah," by Mr. H. S. Cunningham, Appendix V).—F. C.

#### CANALS.

As an instance of what the ryots will do in canal irrigation, under the guidance of an influential district officer, I will quote the following article, which appeared in the *Pioneer* of January 2, 1883:—

#### "DISTRICT WORKS.

"Saturday, the 2nd of December, was a day memorable in the annals of the Jut of Ferozepore. It then dawned upon his unsophisticated mind that it is really possible for rates of taxation to permanently decrease, and that even a district officer has bowels and will not enhance an assessment unnecessarily. It appears that on that day the Deputy Commissioner of Ferozepore convened the abnoshes (lit. water-drinkers), being the recipients of irrigation from the canals of the district, for the annual meeting held to audit the accounts of those canals for 1882. On this occasion it was settled that the *bachh* or rate to meet the expenses of the coming year should be reduced from three annas to two and a half annas per acre. This is the third year of such annual audit meetings, and the second in which such reduction of assessment has been afforded—the

rate for 1881 having been fixed at the first of these meetings, tentatively at four annas per acre. The first reduction had not, however, been fully and thoroughly believed in by the people. It would not last, they thought, now that a new district officer was at the helm. So we are told that 'the abnoshos were agreeably surprised, as there was a rumour afloat among them that the *bachh* would be enhanced this year—so everybody was delighted with the result, and there was general rejoicing over it.'

"Clearly there is something novel about all this, which requires explanation for most of our readers. Every one knows that there is a great canal in the Ferozepore district, and the ceremonies at Rupar are still fresh in our memory. •But evidently the Sirhind Canal is not worked for two and a half annas per acre irrigated, nor is it likely that the owners of the land irrigated will be asked to audit the yearly account of that work. The Ferozepore canals, of which the audit meeting was held at Zira, on the 2nd of December, with such *éclat* (for we learn that they 'had illuminations and fireworks and races, and the *bachh* mela was a grand success), has evidently no connection with the orthodox irrigation department. There are certainly, as many people are aware, systems of irrigation in the Punjab which have not been constructed by the Canal Department, though now under its management; which, indeed, have, in the thirty years that we have held the province, hardly been added to, though certainly the canals themselves have been improved. Such are the

canals from the Indus, Chenab, and Sutlej, constructed by the native rulers of Mooltan and Dera Ghazi Khan. The Ferozepore canals are, however, we are told, not ten years old, so they cannot come into this category. These canals have, it seems, been constructed by combination of the people of Ferozepore and the civil officers of that district; the former giving the labour, and the latter the direction and impulsion. To most civil officers it may appear strange that this sort of thing should be possible without an Act, but in fact not only was legislative sanction not required, but no money was asked for. The people of Ferozepore appear to be a simple sturdy race, with the instinct of reliance on and obedience to a Hakim. If the Hakims had confidence in themselves and hustled these good people into exertion for the purpose of bettering themselves, the people were willing to trust themselves to the Hakims and to do as these directed. So when it occurred to the civil officers that the Sutlej was flowing uselessly past Ferozepore and that its waters might as well be brought to the parched fields, the people turned out obediently to execute the works marked out and allotted to them. The Sutlej never had been led out of its banks certainly, and they had always heard that some saint had said this never should be done; but if the English Hakims knew better, then well and good.

“And so in three or four years the existing system of canals was executed by the labour of the people. And they are cleared and maintained to this hour by the labour of the people. Every year the cubic contents of

clearance in each canal are calculated, as is easy to do, 'benchmarks being fixed in their bottoms to show the designed bed, and the total is divided by the irrigated area in acres of each canal, thus giving a rate of clearance in cubic feet per acre. This rate multiplied by the irrigated acreage of each village gives the quota of that village, to which a length of canal containing that quota of clearance is accordingly assigned. A date is fixed by which clearance is to be completed, and the villages are then left to execute their tasks at their convenience. They do it generally with a rush. On some convenient day after the autumn harvest the whole population of the village proceeds to the spot, and, with drums beating, the work of a month is cleared off in three days. Or, if the spot is inconveniently distant, they give the job on contract to some other village more favourable situated. The most onerous part of the maintenance of irrigation canals is thus disposed of; but of course there are other matters which have to be paid for in cash. A competent manager is required; a surveyor's services are in constant requisition; supervisors are necessary on three hundred miles of canals. Moreover, inundation canals frequently require renewal of heads. A change in the course of the river leaves the head, or cuts it away, or a sandbank masks it. A new head has to be made, sometimes three or four miles long, and the canal has to be perhaps regraded throughout. A competent officer is required to decide on this line; the surveyor has to level it; the officer has then to design the work, and the surveyor to lay it out.

Then the computation has to be made, a rateable distribution of the work effected on the villages concerned, contracts given out, designs furnished. The works and yearly clearance have to be supervised ; moreover, there are constantly distributaries required by the zemindars which have to be surveyed and designed, and their execution by the zemindars looked after. Thus an establishment has to be maintained for the canals, and the funds have to be provided by the beneficiaries ; for of course Government, having no connection with such canals, nor deriving any profit from them, will not assist them.

“ This, then, is the explanation of the ceremony lately held at Zira, in Ferozepore. The abnoshes or beneficiaries of the canals met to audit the accounts of the pay of their *employés* and other expenses incurred upon necessary works not conveniently to be executed by their own labour, for the year 1882 ; also to provide the funds for similar expenditure in the ensuing year. These arrangements are made in the presence and with the approval of the Deputy Commissioner ; but the management of the irrigation is in the hands of a special Extra-Assistant Commissioner, lent by Government to the Ferozepore abnoshes for this purpose, and paid by them out of the above funds, as are the other *employés*. This system was introduced only in the end of 1880, the canals having up to that time been managed by the civil officers of the district. So long as those were the officers who originally took up the scheme this was all very well, and it saved expense to the zemindars.

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But in other hands such a system became unsatisfactory and burdensome, and the present one was accordingly substituted for it. It works satisfactorily, and there can be no doubt that, in this method of constructing and managing inundation canals, an important question has been solved, and that the measure may be developed throughout the riverain districts of the province with much advantage. This is the view taken by Sir Charles Aitchison in a circular directed to the Deputy Commissioners of all such districts, which will, we trust, ere long produce good results. The example of Ferozepore has clearly shown what can be done by officers familiar with the theory and practice of canal construction and management, supported by a manly and willing people. To officers not possessing the necessary engineering knowledge scientific guidance can be afforded. That part presents no difficulty. What remains is to combine energy and influence on the part of the district officer with energy and confidence on the side of the people. Where these factors both exist, the result will be assured."

TABLE I.  
RETURN OF THE TOTAL NET EXPENDITURE UPON ALL SORTS OF

Years.	Protective Public Works.	Other Public Works (ordinary) of all kinds.*	Productive Public Works (other than capital outlay) exclusive of Guaranteed Companies.			Total net charge upon revenue of the year.*
			Irrigation and navigation.†	State railways.	East Indian Railway, from 1st January, 1880 (after its purchase by the State).	
1873-74 ... ..	£ —	£ 4,603,300	£ 349,776	£ 183,638	£ —	£ 5,136,714
1874-75 ... ..	—	5,066,826	372,121	239,547	—	5,678,494
1875-76 ... ..	—	5,125,187	325,372	312,089	—	5,762,648
1876-77 ... ..	—	4,394,435	390,766	440,141	—	5,225,342
1877-78 ... ..	—	4,090,395	113,683	537,988	—	4,742,066
1878-79 ... ..	—	4,426,980	135,658†	681,883	—	5,244,521
1879-80 ... ..	—	4,338,593*	-362,424†	715,203	- 914,757	3,774,615
1880-81 ... ..	—	4,353,882*	-231,140†	543,283	-1,227,167	3,408,819
† 1881-82 ... ..	750,000	5,441,050*	-157,046†	290,295	-1,389,859	4,934,410
1882-83 ... .. (Revised Estimate).	144,200§	6,260,300*	- 84,200†	176,236	- 891,436	5,805,100
1883-84 ... .. (Budget Estimate).	1,355,800§	6,123,900*	- 63,00†	150,324	-1,008,724	6,615,000

\* Exclusive of the amount charged in the accounts and estimates for expenditure on frontier railways, viz. :—

In 1879-80	£1,334,350
In 1880-81	2,293,615
In 1881-82	224,682
Revised estimate, 1882-83	281,500
Budget estimate, 1883-84	67,500

£4,201,647

† Including interest on the portion of capital outlay on Madras Harbour Works charged to the Productive Public Works account.

‡ The figures given above for the year 1881-82 will not be found to agree with those given on page 37, as the former are made up for the financial and the latter for the calendar year. The item of loss by exchange is not reckoned, and the charge for guaranteed rail-

## PUBLIC WORKS IN INDIA, FROM 1873-74 TO 1883-84.

Productive Public Works, capital expenditure (including from 1st January, 1880, East Indian Railway).	Remarks.
£ 3,553,307	Interest on capital outlay on Productive Public Works was charged at 4 per cent. from 1873-74 to 1877-78; at 4½ per cent. from 1878-79 to 1880-81 and at 4 per cent. 1881-82, 1882-83, and 1883-84.
4,249,571 4,270,629 3,809,284 4,791,052	Portion of Land Revenue due to irrigation in Northern India and Bombay first credited to Productive Public Works in 1877-78; and in Madras in 1879-80.
4,381,898 13,095,192	Includes £9,576,614 debt incurred for the purchase of the East Indian Railway.
9,297,233¶	¶ Includes £5,640,728 for outlay incurred in previous years from ordinary funds on Productive Public Works, now transferred, viz. :— On irrigation works ... .. £4,792,017 On State railways ... .. 848,711 £5,640,728
3,952,031**	** Includes £586,300 debt incurred for discharge of portion of the East Indian Railway Annuity, and £640,608 for outlay incurred in previous years from ordinary funds on Productive Public Works, now transferred, viz. :— On irrigation works ... .. £619,084 On State railways ... .. 21,524 £640,608
4,944,400††	†† Includes £450,000 debt incurred for discharge of portion of the East Indian Railway Annuity, and also £1,763,500 debt incurred for the purchase of the Madras Irrigation and Canal Company's Works.
3,820,100††	†† Includes £880,100 savings from previous allotments for State railways, £16,000 for part purchase of Madras Irrigation Canal, and £424,000 for East Indian Railway.

ways is purposely omitted. It will also be noticed that in the case of the East Indian Railway, there is an annual debt incurred for discharge of annuities. I do not know whether any of the interest on this debt is reckoned with that on the ordinary debt of India, (see Table II., note 1). Besides the capital expenditure on Productive Public Works from loans, the India Government spends each year half the Famine Insurance Fund, or £750,000 on "protective" works. In the House of Commons debate of May 8th, Lord George Hamilton remarked of these works that "he had looked upon them with great diffidence," their title meant that "they were non-productive, and that they had been pressed upon the Government by an engineer because the localities did not need them."—A. K. C.

§ The short outlay in 1882-83 was owing to the transfer of the Southern Mahratta Railway to a private company. It was proposed to spend £369,800 on this line during the year, instead of which the company has to refund to the Government about £270,000 for past outlay on the railway. The amount thus set free has been re-allotted for outlay during 1883-84, in addition to the fixed allotment of £750,000.



TABLE II.

BUDGET ACCOUNTS OF PRODUCTIVE PUBLIC WORKS FOR YEAR  
1881-82.\*

RECEIPTS.	£	EXPENDITURE.	
State railways ...	2,556,542	Working and main- tenance of State railways ...	1,686,302
Guaranteed and sub- sidized railways ...	3,615,479†	Interest and share of profits for guaran- teed and subsi- dized railways ...	3,678,754
East India Railway..	3,261,857‡	Ditto for East India Railway ...	1,438,703‡
Irrigation and navi- gation ...	865,799	Working and main- tenance ...	455,635
Madras Irrigation Company ...	8,834	Interest, etc. ...	50,496
Land revenue due to irrigation ...	491,220	Interest on debt for productive public works :—	
		(1) Railways ...	1,594,687‡
		(2) Irrigation...	726,386
		Miscellaneous ...	17,952
	10,799,731		9,649,005
Other irrigation works ...	181,239		789,933

\* These accounts are made up for the financial, not the calendar year. The rupee is reckoned throughout at 2s.

† Net traffic receipts. The companies pay for the working expenses, etc.

‡ See Table I., note †. This sum does not represent the whole charge on the Indian Government for the East India Railway. In the railway report the yearly charge on the railway is said to be £1,631,500 + interest at 4½ per cent. on capital advanced by the State since the purchase, viz. £1,107,683. Mr. Juland Danvers informs me that of the interest on debt for State railways £434,242 is for the East Indian line. If so, there remains an interest charge of £1,160,445 (net charge £290,295) for the State lines proper. This is considerably less than the sum £1,395,360 given on page 38, and is not explained by the difference between the financial and calendar year. I imagine that in the annual report interest is charged on the capital (nearly £4,000,000) expended on

TABLE III.

According to the latest returns, the Indian railways, taken altogether, are said to yield 5½ per cent. on the capital expended. An analysis of financial results of the different railways up to 1881 shows that there are only two lines which are beginning to pay their interest charges on the *whole capital* expended:—

	Net interest charges advanced by State.	Total surplus profits. Half share to State.	Net earnings in 1881 on borrowed capital.	Year of completion.
	£	£		
East India Railway ...	3,462,679	5,855,427†	8·85	1871
Eastern Bengal ...	330,381	582,317	9·46	1871
Great Indian Peninsula...	6,611,096	1,694,441	6·28	1871
Bombay, Baroda, and Central India ...	3,165,352	195,379	6·55	1877
Sind, Punjab, and Delhi ..	6,064,598	3,872	2·55	1870
Oudh and Rohilkund ...	1,663,204	none	3·12	1874
Madras ...	5,643,207	none	1·81	1873
South Indian ...	1,484,602	none	2·72	1868
	28,425,119*	8,331,436		

frontier railways (see note \* Table I.), but this is not reckoned in the above statement. By this means the State is accreditd with all the gains of these railways and none of the losses; the most costly railways are made out to be the cheapest, the fact being that they are constructed out of taxation, imposed under the head of war charges, famine insurance funds, and other high sounding titles. It thus becomes impossible, without minute investigation, to say whether any given line pays its way. It is the same with irrigation works.

\* The State's share of profits is, I believe, deducted before these figures are made up.

† The East India Railway profits since purchase are not included (see Table I.). The State railways have no surplus profits. It must also be pointed out that the receipts due to war and famine have considerably increased the profits of the railways, but the State had to pay heavily for both. The Afghan war gave the Sind, Punjab, and Delhi railway company a present of £1900.

## APPENDIX C.

“INDIAN villages may be grouped into two broad classes, which, before I describe their differences, I may at once characterize for convenience of reference as the joint, or united, and the non-united village.

“The essential feature of the joint village is that all the land inside its limits, whether waste or cultivated, belongs (either as the result of its natural constitution or of our revenue system) to the entire body of village “proprietors.” The management of affairs is by a *panchayat* or committee, representing the heads or elders of each section; if there happen to be no sections, the *panch* may be a single individual. The village also is assessed by Government in one lump sum, for which the whole body is jointly responsible.

“In the non-united village, on the other hand, no one has any claim to anything but his own holding: the village, of course, makes use of the waste for grazing or wood-cutting, but the State can grant it away to any one it pleases. The village, again, is managed by a single headman (called *patel* in Central India, *mandal* in Bengal, *mugaddam* in Northern India, and by various names according to varieties of dialects

in the South). This headman is partly, at any rate, appointed by the State, though the office, like everything Hindu, becomes hereditary by custom. The headman realized the Government revenue from each holding, and this was done by dividing the grain produce before it left the threshing-floor. In later times, when the governing power demanded a lump sum as revenue from the village, the headman apportioned the burden among the landholders. Each had then to pay the allotted share, whether light or heavy; but there was no joint responsibility of the village as a body. If one man failed or absconded, the others had nothing to do with it; the headman arranged for the cultivation of the vacant holding. There was no objection to outsiders coming in on the same terms as the rest, and there was no pre-emption right."

The joint village, according to Mr. Baden-Powell, is to be found chiefly in the Punjab and North-West Provinces, also in parts of Oudh, Central Provinces, and Northern Bombay. The non-united village is to be found chiefly in Central and Southern India, in parts of Bengal (though in the latter province it has fallen into decay), and in Oudh. With the exception of the land-holding classes, the features of the two types of villages are much the same. There are the village accountant and the watchman; the artisans, such as the carpenter, the potter, the leather-worker, and blacksmith; the washerman; the water-carrier; the barber; the astrologer; the minstrel; the priest; the dancing-girls; and the money-lender. "All have their recognized position in the

village, and their perquisites and remuneration in grain or otherwise." Then there will be a few tradesmen who sell foreign goods, and, last of all, the menials and labourers of all sorts.\*

One of the most disastrous results of the gradual dissolution of the village system, especially in the most Anglicized districts, is the supersession of the old resident money-lender, very often the village headman, or one of the leading land-owners, by the foreign usurer, called the sowcar. In order to secure to the ryot easier terms than those afforded him by the sowcar, Sir William Wedderburn has recently proposed that land-banks should be established in the Deccan, the capital to be furnished partly by native and partly by English capitalists. The success of land-banks in other countries is quoted as justifying the sanguine hopes entertained as regards this new Indian experiment, and if the native money-lenders can be induced to embark their capital in the banks and give the benefit of their local experience, the banks may prove beneficial to the ryot. But there are certain considerations of an important nature which appear to have been ignored by the different advocates of these land-banks. If the banks, which it is proposed to gradually establish throughout India, are to be in part supported by English capital, and the Indian Government is to use its land-revenue machinery for the

\* See "A Manual of the Land Revenue System and Land Tenure of British India." By B. H. Baden-Powell. Government Printing Office, Calcutta, 1882.

collection of interest, a twofold result will ensue. First, another great trade will, by the help of the power and prestige of the Indian Government, be gradually appropriated by English capitalists, and another cause of depletion, in the shape of home remittances for interest, will be added to those already existing. Secondly—and this is a point which wholly differentiates the proposed Indian land-banks from those of self-governed countries—the last buffer between a foreign government and its poverty-stricken peasantry, suffering from a much more exhausting drain than the demands of the usurer, will be removed. All the bitter feeling which has hitherto been directed against the native money-lender, as in the Deccan and among the Sonthals, will be turned against the Indian Government, which, in addition to the collection of its own land-revenue, will be forced by absent and necessarily ignorant capitalists to collect the instalments of interest due to the land-banks. The strict exaction of the land tax in years of scarcity, which has, notoriously in the Deccan, Jhansi, and the North-West Provinces, increased the indebtedness of the peasantry, will lead to still more disastrous results, if the Government is to give a guarantee to the English money-lender.

I believe myself, and my belief is based on the opinions of many experienced district officers, that more real help is to be given to the Indian ryots by a return to a more elastic system of collecting the land-revenue, such as is the practice in Native States, and was the practice formerly in British Provinces, than in

any direct interference with the native money-lender, except so far as to secure by provisions, similar to those of the Deccan Ryot Relief Act,\* a simpler and cheaper system of procedure, and fairer dealing between both parties concerned.

\* For provisions of this Act, etc., see "Discontent and Danger in India," pp. 52-67 and 127-131.

THE END.

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